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A CLINICAL LECTURE.

*ON THE TREATMENT OF DYSPEPSIA.**

DR. MURRELL'S second clinical lecture at the Westminster Hospital this session was devoted to the consideration of the best methods of treating dyspepsia. He stated that he found it by no means an easy matter to frame a definition at once concise and accurate which would include all forms of this protean malady. We know little or nothing of its morbid anatomy; it was absurd to speak of it as an affection of the stomach, for in many cases all parts of the alimentary canal, and even of the secreting glands connected with it, were affected. In what was called "nervous dyspepsia" the disturbance of function was not in the abdominal viscera, but in the higher nerve centers. For practical purposes, however, two great classes of dyspepsias might be recognized, one in which there was a deficient secretion of gastric juice, amounting sometimes almost to suppression, and another in which there was an excess of acid in the stomach, due either to hypersecretion or to fermentation of the food constituents, the consequent formation of lactic, butyric, and acetic acids. There was another and a rarer form in which the food was retained but a short time in the stomach, and was then passed through the pyloric orifice into the intestines, where it excited peristaltic action and gave rise to a copious evacuation immediately following each meal.

The treatment of cases of dyspepsia due to deficient secretion was simplicity itself. Pharmacological investigation taught us that alkalies increased acid secretions. The gastric juice was acid, so that all that was necessary was to give an alkali before meals. It mattered little or nothing what alkali was given; it was simply a matter of convenience and custom. As a matter of fact the favorite alkali in these cases was bicarbonate of sodium, and it was usually administered in conjunction with tincture of gentian, or some other stimulating, bitter tonic. The gentian and soda mixture was a great favorite and was a a stock remedy all over the world. Large practices had been built up on a knowledge of therapeutics not greater than would enable its possessor to write out the simple formula. As an accessory measure it was useful to give a few drops of dilute hydrochloric acid with or without nux vomica immediately after meals.

In the treatment of the second group of dyspepsias, characterized by an excessive formation of acid, an exactly opposite system of tactics must be pursued. Acids checked acid secretions. The patient was suffering from acidity, to use a popular phrase, so we gave acids before meals, the usual prescription being fifteen drops of dilute hydrochloric acid with tincture of nux vomica and gentian a quarter of an hour before dinner. Sometimes, however, this failed to check the formation of all the excess of acid, and then the best plan for the relief of the sufferer was to administer a compressed tabloid of bicarbonate of potassium, or a dose of sal-volatile. Occasionally we succeeded only in getting rid of the acidity, and failed to remove the flatulence. This, however, presented no difficulty, for an antiseptic would

* Report of a lecture delivered at the Westminster Hospital, London, by William Murrell, M.D., F.R.C.P.

check the continuance of the fermentation and give almost immediate relief. It mattered very little what antiseptic was employed; carbolic acid or creasote would do well enough, but it was usually found more convenient to give one of the essential oils, such as oil of cajeput (in three-drop doses), or, better still, pure terebene, or the newly-discovered pinol.

Arsenic was found to be wonderfully useful in those cases already referred to, where the food passed too rapidly through the intestinal tract, and it was equally efficacious in gastritis, simulating dyspepsia. A good indication for its administration was when the tongue was furred and covered with red and irritable papillæ. A drop of the liquor arsenicalis might be given every three hours, or one of the compressed tabloid triturates containing $\frac{1}{100}$ grain of arsenious acid before each meal. Opium (a drop of the tincture) or morphine (a twentieth of a grain) in small doses was equally useful, and nux vomica was the best remedy when the patient complained of pain and weight at the pit of the stomach, accompanied by acidity and heartburn. Ten drops of the tincture of nux vomica in a tumbler of water could be sipped slowly in the morning before breakfast, whilst dressing, or a compressed tabloid containing one minim could be taken at intervals during the day, with an additional dose before and after meals.

Pepsin was of great value in the treatment of dyspepsia if certain points were attended to in prescribing it. It would not do simply to write down "pepsin." Pepsin by itself, unqualified, had no meaning, and it was essential to indicate distinctly what brand of pepsin was required. The lecturer stated that during the last two years he had tested carefully all the pepsins of which he had been able to obtain specimens. The results were somewhat startling. Of two different kinds of pepsin, equally popular and equally well known, one was found to be five times as active as the other. The best pepsin was Fairchild's, Bullock's came next, and then Squire's. The French and German pepsins were a long way down in the list, and could not be compared for one moment with either the English or the American. It was difficult to institute a comparison between pepsin itself and the various fluid preparations of pepsin. Taking them weight for weight, the best pepsin was twenty-three times as active as the best liquid pepsin. It might be argued that the dose of the liquid preparation should be much greater than that of the solid, but that was only another way of saying that it was less active. Another point in the administration of pepsin was to give plenty of it, and to give it immediately after food. The ordinary dose was too small, and no hesitation need be felt in giving from fifteen to twenty grains. It was often said that pepsin yielded good results in the treatment of children but failed with adults. The explanation was that children were usually given the ordinary adult dose. If grown up people were treated with equal liberality there would be few complaints of its inefficacy. Of late years a great deal has been written about *carica papaya* as a digestive agent, but as a matter of fact papaw-juice could not compare in activity with the best pepsin, and papain and papayotin were not much better. The best papain examined had about half the activity of the best pepsin, as shown by experiments made both in acid and alkaline solutions. In many forms of dyspepsia—"starchy dyspepsia" especially—extract of malt was found to be the most powerful therapeutic agent. Here again much care was required in the selection of a thoroughly good and reliable specimen. The plan of predigesting milk and other articles of food with zymine answered admirably, and should always be resorted to in intractable cases.

There were certain accessory measures to which it was essential to pay attention in the treatment of dyspepsia, and special methods of treatment, such as washing out the stomach, might be found useful. The condition of the teeth was a matter of the greatest importance. Very often the patient had a good set of incisors, but nothing available for mastication. Stumps would have to be removed, teeth stopped, and often a complete denture fitted before anything else could be done. The physician and the dentist should coöperate, and work hand in hand for the benefit of their patient. The custom of taking meals hurriedly and alone was a fertile source of dyspepsia. The sufferer, if a batchelor, should live in a family or join a good club and dine there. A fair amount of work and exercise was essential for the patient's well-being, and he could not hope to digest properly unless he did something to earn an appetite. For the busy man of sedentary habits, riding should be recom-

mended as a good means of stimulating the action of the liver and affording exercise without causing too much fatigue. The meals should be taken in a bright, pleasant, well-lighted room, and too much attention could not be paid to the accessories of the table. The food should be abundant and varied in quality, whilst the post-prandial cup of coffee with a cigar or cigarette might rank as useful therapeutic agents. A fair amount of stimulant, taken only at meals, such as half a pint of sherry or a pint of good claret, often served as an aid to digestion. Some patients, however, derived more benefit from a little whisky and apollinaris than from wine. As a substitute for sugar, saccharine might be recommended.

The lecturer, in conclusion, referred briefly to what was frequently called "American dyspepsia." Indigestion in various forms was undoubtedly very common amongst Americans, and might be attributable in some measure to the high pressure at which they lived, and the hurried manner in which meals were taken. The custom of drinking large quantities of ice-water at the commencement of a repast might prove injurious by diluting the gastric juice, whilst the absence of stimulants was not always an unmixed blessing. The plan followed at many hotels, of placing all the dishes on the table at once was not to be commended, especially in the case of patients with small appetites and weak digestions. Still, the great variety and choice of food universally met with in the United States was an advantage. Many Englishmen were greatly benefited in health by a trip across the Atlantic, and no one could fail to admire and appreciate the generous hospitality with which strangers and visitors were always received. Many Americans now-a-days visited England as the quickest, surest, and best means of obtaining relief from dyspepsia, and the treatment, if carried out under efficient guidance and supervision, often worked wonders. Massage was a valuable accessory agent, and seemed to be especially adapted for ladies requiring rest and relaxation, and freedom from the worries and cares of every-day life. The facilities for crossing the Atlantic were now so great that it was surprising that more dyspeptic sufferers did not avail themselves of this means of effecting a cure.

The lecture concluded with an exhibition of menus illustrating various schools of cookery in the dietary suitable for invalids.

ORIGINAL COMMUNICATIONS.

SYMPTOMS OR CAUSE?

BY JOHN A. HEATLY, M.D.,
SCHENECTADY, S. C.

THE questions at issue in the practice of medicine naturally resolve themselves into one. Shall we deal with the results or the cause; attempt to stop that which in itself is dependent on something else, or go directly to the source, and by directing all our force against it suppress it, as well as its dependents?

Physicians, more than any other class, are called upon to trace things to their origin, and to do so successfully several things are necessary. The physician should have a fair knowledge of minute anatomy; he should know the physiological action of the different organs; the quality and quantity of their secretions or excretions; when the organ or gland is at its greatest activity when at rest; what is the action of the secretion; if it is a digestive ferment or secretion; on what class of foods does it act, or whether the secretion be a simple lubricant.

He should have a knowledge of chemistry, so as to take advantage of the chemical action of drugs in the system. He is often favored by osmosis or endosmosis; if he does not have the knowledge to profit by this fact, he will have his surprises and be unable to account for results.

Some men are ashamed to ask a patient many questions for fear of the patient thinking that they should have known that without asking. The questions may be delicate ones, the doctor a single man; but, single or married, he is supposed to be a gentleman, and to guard all secrets which he may acquire in his professional services. For fear of giving an impression of ignorance he will then often guess at what a few questions would clear up, and wonders why he is not successful in his treatment.

With the title of this paper in view, let us glance over a few of the more common diseases as regards the treatment of the symptoms or of the cause.

Of what service are astringents in a case of diarrhœa brought on by eating indigestible food? Why not make use of a laxative, get rid of the offending substance, and then, if the diarrhœa continues, make use of our astringents, or whatever plan of treatment we may

follow. We should find out the cause and advise our patient so that he may guard against it in the future. If the diarrhœa is caused by drinking water he should abstain from it, or at least drink it after it has been boiled. It may occur in a patient sick with typhoid fever, and here we must use our judgment as to the advisability of trying to stop it.

So also in chronic diarrhœa, one of the most obstinate of all things to treat. The food may be passed several hours after eating in an undigested form. Here we should direct our treatment to that part of the alimentary tract in which the food should be digested, and if the trouble be due to a deficiency of secretion, let us tone up the organ or gland, or aid it by one of the prepared substances at our command. If there is an excess of any secretion let us counteract it. It may occur in a patient sick with phthisis. Here we should be guarded in our prognosis. When we have it in a patient living in a malarial district, let us try our antimalarials.

In cases of leucorrhœa we should remember that the vaginal mucus is acid, that the mucus of the uterus and mucus in general is acid. We should be informed to what extent these secretions may be carried and yet be normal, and in cases of profuse discharges from the vaginal region a litmus paper is of great service. In all cases of this character we should insist on making an examination with the speculum, but if we cannot do this a digital examination is of some service, for truly the finger is an eye to the physician. We must distinguish simple from purulent discharges by their character, color, by the fact whether it be acid or alkaline, by the circumstances under which it came on, and the time it has continued. By means of a speculum we should see whether it comes from the uterus or vagina; by pressure on the urethra, see if we cause any to appear at the meatus urinarius, and if there is pain on micturition. We should also ascertain whether the woman be pregnant; if there is a sympathetic communication with any other diseased part of the body.

Of what use is it to throw astringent injections into the vagina if there is a lacerated cervix or a granular condition of the external os? There may exist a cancerous condition, the space between os external and os internal may be diseased, or we may have the source in the uterus itself in the form of an endometritis. There may be a flexion or a version of the uterus, causing a retention partially of the menses and a decomposition of the blood, and hence a discharge.

Of what benefit have your injections been? You may make a large bill and get your pay, but sooner or later your case will fall into the hands of a man who thinks twice, and who makes a good examination before he commits himself by an opinion one way or the other.

Where are your good results when you give a patient suffering with cystitis the ordinary treatment, when the real cause is the formation of a stone, or when due to an excess of phosphates caused by anæmia? May it not also be caused by diet?

Examine the urine, and have a microscopical examination made. Inquire into the general health and habits.

You may allay the itching in a skin-trouble or stop the discharge in an old ulcer, but if the former is due to constitutional trouble or the latter is associated with caries or necrosis of bone, would it not be better to treat the cause instead of the result or symptom?

THERAPEUTIC MEMORANDA.

MUCH has been written of late in regard to the properties of antipyrin; in fact, it has been extolled to such a degree that many no doubt have been somewhat prejudiced against its use on this account. Again, like all new preparations brought before the profession, it must needs stand various tests to insure its recognition at their hands. Perhaps I have not given it as extensive a trial as many others, but I certainly have given it in a sufficient number of cases to become convinced of its usefulness, and to become one of its strong advocates.

My first experience in the use of antipyrin was in the reduction of temperature. At first I combined it with other antipyretic remedies, and found that I had invariably better results by this method than formerly without it. Then I began and continued its use alone for a period of many months with the happiest results. In the early part of 1886 I combined it with my usual treatment for rheumatism with a success that was pleasing to myself and gratifying to my patients. The cases were not in any way selected, as I took each one as it came up in my practice, using the same treatment for the young and old, strong and feeble, and simply

varying the dose according to age and condition. I could give reports of a number of cases, but it would only be a repetition of results, and one or two will suffice as examples.

I was called in 1886 to attend Mr. B——, who had suffered at various times from articular rheumatism, and had usually been confined to the house for a number of weeks before he was able to continue his duties on the farm. He was a strong, healthy-looking young man, of good habits. When I first saw him he had six joints affected, had a high fever, and was in great pain. I prescribed

℞. Antipyrin . . . . 3j.
Soda salicylatis . . . 3ij.
Soda bicarbonatis . . . 3iv.
M. Ft. pulv. No. xx.
Sig.—One powder every two hours.

On the fourth day, when I visited him, he opened the door for me, and, although he was using a cane at the time, in a few days he was perfectly well and attending to his duties.

My next few cases of rheumatism were in young subjects, and I thought possibly this had something to do with my success apart from the treatment, until I was called to see Miss A— in 1887. Here is a case, I thought, to test my faith in antipyrin. She was of a rheumatic diathesis, and her age, over 70, was certainly against her. She was living alone, and one of her relatives found her sitting in her chair unable to move. She was placed in bed, and I was sent for at once. She had a high fever, an accelerated pulse, and was suffering great pain. I gave opium in pill form for this, and then the antipyrin and soda mixture, and advised lemonade with the addition of soda bicarbonate to drink. She made a good recovery, and in eight days was around the house attending to some of her household duties. I advised her to continue treatment for a few days longer; she failed to do so, and had a return of the disease, but soon recovered with the use of the first treatment.

The objection may be made, and justly so, that the antipyrin was in combination, and that we are not able to make satisfactory deductions. In answer to this I would say I have given the salicylates without antipyrin, but have failed to get the good results. I now combine it with ol. gaultheria, and by so doing secure a very palatable mixture, and does not in any way, "as you all know the uses of this oil," affect its use, but rather adds to it. I have given it in a case of sciatica of malarial origin combined with quinine with good effect. Some months ago I was called to see a physician's daughter who had been suffering for a number of days with continued fever. Her father had given her quinine, aconite, etc., but had failed to control it, and feared there might be deep-seated trouble. I advised the use of nothing but antipyrin in 5 grain doses, repeated every two hours. The headache disappeared, the flush on the cheeks passed away, and in a short time she returned to school. Her father is one of those who is, if not opposed to it, certainly not one of its advocates, but he has since spoken to me of the good result in his daughter's case. During the past year I have given it in almost every form of headache, and I have yet to find a drug that has given the satisfaction that antipyrin has. Some of my best patients have become so through my having relieved them of headache by this drug, and I shall hope to report at some future time cases that are now under observation.

UNION BY PRIMARY ADHESION.

BY W. E. FAIRFIELD, M.D.,
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THIS is the union which we should endeavor to obtain in the treatment of all incised wounds. To my mind, the following are some of the principal causes of failure in this direction:—

Foreign bodies are not always removed. A grain of sand is as much a foreign body as a piece of wood, and its presence in a wound is quite sufficient to cause irritation and prevent primary union.

Closing a wound before oozing has stopped is a fruitful cause of non-union. A layer of blood is deposited between the opposing surfaces of the wound, decomposition sets in, and irritation is the result. Then follow all the symptoms of inflammation; pus forms and finds an outlet. All sources of irritation being finally removed, the wound heals by granulation.

I have seen a number of incised wounds, in the same patient, sutured in exactly the same manner. Those first attended to by the surgeon failed to unite, but those left until the last united by primary adhesion. The reason for this, to my mind, is clear. In the last the

oozing had *ceased* before the parts were brought into their original positions, leaving no stratum of blood interposed.

Adhesive plasters are too frequently made use of in closing deeply incised wounds. The plasters serve to draw the cut edges of the integument into apposition, but this effect is not produced upon the muscles and deep-lying tissues. An incised wound half an inch in depth cannot easily be brought into a condition of surface apposition by adhesive plasters. It is far better to leave the wound open than to render impossible the discharge of the decomposing material which must necessarily form.

Deep sutures are too frequently omitted. Superficial sutures are open to the same objections as adhesive plasters. Deep sutures should be placed at distances of not more than three-quarters of an inch apart, and these should penetrate to a point somewhat below the bottom of the wound.

Put all the deep sutures into position, wash out the wound with a weak antiseptic solution, and then tie the sutures. Superficial sutures may now be inserted between the deep ones.

The simple tying of a stitch requires no small amount of surgical skill. If tied too tightly it will cut its way through the tissues. If too loosely it will fail to hold the parts into place. After tying the first knot, be careful not to pull upon either end of the thread, for this will surely loosen the knot already tied. Make the second knot with the threads hanging loosely, and then carefully draw the knot down into position.

Antiphlogistic treatment is very often neglected by the medical attendant. A certain amount of inflammation is necessary to the production of primary adhesion, for by that process the "binding link," plastic lymph, is thrown out. If this necessary process is allowed to overstep its boundaries, pus is formed. Exudations from the wound are almost certain to appear, and in view of this we must apply a dressing that will permit of free drainage. Some form of antiseptic gauze, covered with a layer of jute, is a very useful dressing.

Remove the patient as far as possible from all sources of infection. Secure perfect rest for the part, and allow your patient a good supporting diet. Few or none of the above suggestions are new, but their importance is such that they cannot too often be impressed upon the mind of the practitioner.

RHEUMATIC DIATHESIS.

BY N. T. DULANEY, M.D.,
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THE following cases illustrate the importance of recognizing diathesis in practice:

CASE I.—Mrs. F., aged about 50 years, married about one year, with no children; rather large and fleshy, with red cheeks, but nervous to a degree amounting almost to paralysis agitans. She had a severe attack of asthma in December, for which she was treated by a physician a few days only, with considerable relief. But on account of sickness the physician discontinued his attention, and she had remained about five weeks without treatment when I was called to see her.

I found her laboring under great embarrassment of breathing, with the bronchial apparatus set to the music of the "cantus omnium avium." It seemed that all the râles we read about were there, and that they had come to stay, for she said she had suffered that way for about a month, with nightly exacerbations, getting worse toward morning. Tongue somewhat coated and too red; bowels rather costive; pulse too quick; urine high-colored; cough troublesome. Having treated this lady for various local affections at different times, which I regarded as due to lithiasis, and which readily yielded to treatment adapted to that condition, I regarded this (asthma) as an expression of the same condition, and prescribed accordingly. Iodide of potassium was a favorite remedy for asthma with the late Professor Jno. K. Mitchell.

Believing it especially adapted to this case, I prescribed it in doses of 5 grains with 20 drops of wine of colchicum three times per day, and calomel and Dover's powder at night, to be repeated in 48 hours. Also chloral and brom. pot. in 8 to 10 grain doses each hour in water, and a blister to the spine.

In 48 hours, under this treatment, the patient was much more comfortable; and in four days she was breathing easily, the wheezing was almost entirely gone, and the cough much relieved. The improvement still continues, with no recurrence of paroxysms.

Without recognizing and treating the diathesis in this case, I feel sure the case would have been much prolonged.

CASE II.—Mrs. R., a married lady, aged about 25 years. Subject to rheumatism. Had retention of urine following her second con-

finement, which continued in spite of treatment for three or four weeks. About this time she had an attack of acute rheumatism affecting the knee-joints, which was treated with colchicum and alkalies; and in three or four days under this treatment the retention disappeared, the patient gaining full control over the bladder. That this result was not due to metastasis, but to the remedies used, is proven by the result of treatment in a subsequent case of like nature on same patient.

Her next confinement was followed by retention of urine, which was treated by another physician without relief for about two weeks, when I was called to see the case in consultation. There was no *manifest* rheumatism in this case, but, profiting by past experience, I suggested a *rheumatic* prescription. We accordingly put her on alkalies and colchicum, with calomel and colocynth as a gargle, and in two or three days the bladder regained its tone and the retention disappeared. Hundreds of such cases could be cited from practice showing the necessity of inquiring into constitutional predisposition and peculiarities, if we would secure the best results in our efforts to combat disease. If a neuralgia or paralysis or skin eruption be due to syphilis, treat that. If an inflammation, internal or external, or functional derangement, as of the heart or stomach or liver, be due to gout, whatever else you do, address treatment to the eradication of the gout. If you would kill the tree, attack it at the root and not at the top.

A REPORT OF ONE HUNDRED AND FORTY OBSTETRICAL CASES.

BY A. R. CAIN, M.D.,
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WE hope the following report of obstetrical cases may be of interest to the readers of this journal. The one hundred and forty cases might have been extended if more careful notes had been taken early in our practice, but we cannot trust to memory, and only give those that we have in our case-book. Thirty-eight of the one hundred and forty mothers were primiparæ, the youngest of whom was fifteen and the oldest thirty-five years of age. Seventy-four of the children were males. Seventy-three of the labors occurred between the hours of sunrise and sunset. Twin births occurred twice. Vertex presented in one hundred and thirty-six of the cases. There were three breech presentations. In one twin birth there was a foot presentation of each child. There were four still births,—one from injury to mother, one from protracted labor, one from an unknown cause, and one from tight lacing. Forceps delivery was necessary in two cases. Puerperal mania followed one forceps delivery, and continued very violent for several days, but ended in complete recovery under home treatment.

Post-partum hemorrhage was severe in only three cases, one of which died under the following circumstances:—

CASE I.—Ruth H., mother of several children, was taken in labor July 19th. After a few pains a dead fœtus enveloped in unbroken membranes was expelled, followed immediately by the placenta. The womb did not contract and a severe flooding took place, deluging bed and running through on floor, which was uncarpeted. This caused a splashing sound, which made quite an impression on the patient. After great labor and various methods the hemorrhage was checked, leaving woman very weak. Some of the numerous women present accidently spilled some water, when the patient, hearing it running on floor, exclaimed, "There it comes again" and immediately expired, as we supposed, from heart failure, due to excitement produced by the thought of a renewal of the hemorrhage.

Two cases of puerperal fever occurred, of which both patients died.

CASE II.—Mrs. S., aged 25 years, of good constitution, mother of three children, was delivered April 29th, after a normal labor, of a healthy male child. On the second day following she was restless, but showed no symptoms of any trouble. The lochia discharge was free, after-pains troublesome, severe at times. On the third day she complained greatly of pain in the back, headache, and of the light hurting her eyes. There was no swelling or tenderness of bowels. In the evening her temperature rose to 105° Fahr., and pulse to 120, which continued until the morning of the fourth day, when patient became very much prostrated, her temperature sinking in a few hours to 100° Fahr., and pulse to 68. She rallied with difficulty, but afterward appeared more cheerful, laughing and talking to friends. Her bowels moved

freely. There was some tympanitis, but no tenderness. The symptoms continued to grow worse. On the fifth day her pulse was feeble and rapid, her temperature from 103° to 105° Fahr., the breath having a very sweet smell. She had no appetite, was delirious at times, and had a cough with a tenacious expectoration. On the sixth day the cough increased with great amount of expectoration. Lochia continued free, and there was no smell during sickness and no secretion of milk. She had one chill on the night of third day of disease. Her mind became very active on the last day of sickness. She talked rapidly and wildly all day, refusing all food and medicines, and died on evening of sixth day.

CASE III.—Hulda H., aged 20 years, mother of one child, was delivered April 30, 1886, of a healthy female child. In two hours after confinement had a severe hemorrhage. She did well from that until May 4th, when she began to complain of soreness and pain in the region of the womb. The lochia was too free, with an occasional discharge of a large clot. The child was nursing. There was a good secretion of milk. The patient had been troubled several years with a bronchial trouble, which now became worse, and each severe spell of coughing brought on a slight hemorrhage. The symptoms continued to grow worse, her temperature varying from 103° to 105° Fahr., with a tenderness and swellimg of the bowels. The lochia discharge became at times very fetid, the patient growing weaker day by day until the twenty-sixth of May, when she died, the twenty-seventh day after confinement.

In none of the cases was there a lacerated perineum. Chloroform was used once. There was no case of adherent placenta, and in no case was there over two hours from the time of the delivery of the child until the delivery of the placenta, which was usually by *vis à fronte*. Credé's method was used only twice. I made several attempts to deliver placenta by it, but the patient always complained of its hurting so severely that she would not submit. I had no case of placenta previa or puerperal convulsions, but I had one case of epilepsy.

CASE. IV.—Ada M., age 15, unmarried, of good constitution, had never had epilepsy. Some of her mother's brothers had been subject to attacks. She was delivered, May 20th, of a healthy male child, after a severe labor. Almost immediately after delivery of the child the patient was seized with a severe epileptic attack lasting several minutes. I made an examination for placenta and found the womb rigidly contracted. As soon as the attack passed off, I introduced my hand into the uterus, which I found had relaxed, and finding the placenta lying loose I removed it. Another attack followed. From that several fits occurred, but gradually subsided under full doses of bromide. She has had no return of epilepsy, although she has married since and been delivered of two healthy children after easy labors.

Chloroform was used in only one case. One patient died on fifth day after confinement of consumption. Her confinement was remarkably easy. She was hardly conscious of pain at the birth, although her mind was not impaired in the least. She was very low with the disease, very much emaciated; but the womb contracted firmly without any hemorrhage.

In one case there was no perceptible colored discharge at labor, the labor being bloodless.

The shortest space of time between births from the same mother of children at full term was eleven months, the longest time nine years.

The largest child weighed eleven pounds; the oldest mother was forty-six, the youngest fifteen.

Ergot was only administered in a few cases prior to the birth of the child. I relied greatly on pressure of the womb by the hands of assistants after the child was born to prevent hemorrhage, I always used the bandage.

THOUGHTS ABOUT GYNÆCOLOGY.

BY THOMAS G. BRACKING, M. D.,
KANSAS CITY, MO.

IN the field of gynæcology there is a great deal more involved than the casual thinker would be at all likely, at first, to conceive of. The womb and its annexa proper may justly be denominated a focal center of nervous forces and influences. There are two focal centers of special manifest influences besides the brain, the head-center of all nervous origin. The stomach is the afferent, or *centripetal* center, to which nervous influences are attracted from every other part of the whole organism, and is manifest by sickness, loss of appetite, nausea, etc.

The uterus is the efferent, or *centrifugal* center, from which nervous influences and forces of the most powerful character often are sent out, not only to the stomach, the centripetal center, but to the brain, and thence, reflectively, to various other minor centers, and often involving every part of the entire body. Nearly every morbid or abnormal condition that besets the womb is sooner or later made manifest by pain in the lumbar region of the back, nape of the neck, side, etc., through the spinal accessories, and through branches of the sympathetic to the stomach, causing loss of appetite, nausea, etc. It is said that we are wonderfully and fearfully made, and when we have made anything like an extensive and careful investigation and study of the female organism we are overwhelmed with the profundity of its awful truthfulness. We find that not only is the whole body affected as a resultant of abnormal conditions of the womb, but that even through physiological and normal conditions of the womb other parts, and even the whole body, becomes thus affected. See what phenomena we often find from simple and normal fecundity: sick stomach, loss of appetite, urinary embarrassment, cardiac disturbance, hyperæsthesia of nerve sense, hysteria, melancholy, etc. And even in the ordinary catamenia we often find leg-ache, back-ache, hypersensitiveness, peevishness, petulency, and sometimes a condition of general *malaise*, etc. And if the womb is in a pathological condition those symptoms are the more prominent and often greatly aggravated. In case of prolapse or retro- or anteversion of the womb the woman is not only troubled with the above symptoms during the menstrual epoch, but they continue with more or less severity during the interim, and are often accompanied with mucous or muco-purulent discharges, constipation of the bowels, etc. To correct those displacements of the womb, and thus to relieve those exaggerated local and reflex symptoms, it is only needful, as a rule, to readjust the womb and to hold it *in situ* by a properly constructed and well-fitting pessary till nature can regain her wonted tonicity, so as no longer to need those helps for the maintenance of her integrity.

But when flexion of the womb obtains, those symptoms are still more aggravated, often intensely so, and especially on the nerve-centers. Menstruation is rendered extremely painful and often very difficult; back-aches, head-aches, side-hurts, stomach out of order, *ardor urinæ*, of almost constant and distressing character, etc., etc. These are the centrifugal influences sent out from this focal center. To correct flexion of the womb we find a great deal more difficulty than it is to correct the displacements of that organ. Many and various means have been contrived of more or less merit, and many more which are not only useless, but of very material harm; and none of them are of much use without sufficient practical skill to adopt the right sort for the case in hand and to adjust them so as to meet the demands in the case. And no routinism will do to depend upon either; but an expert is required in each case, as if that were the only case like it, in order to command success. And a very essential factor of success is a correct diagnosis, for without that all is but a grope in the dark, with very grave uncertainty. But besides the displacements, flexures, catamenia, fecundity, etc., to which the womb is subject, giving rise to all the varied phenomena already alluded to, there are a great variety of other pathological conditions and formations to which the womb and its appendages are incident, and to which I propose to invite attention for a few moments.

Without entering into the etiology of the different forms of morbid growths found in the womb, etc., I shall simply deal with them as existing facts. First, there is a formation of fibrous structure often developed in the parenchyma of the womb, which renders the portion involved unnaturally dense and hard, according to the amount developed. If it be very extensive it retards and often prevents the natural functions of the womb, rendering menstruation very difficult and painful, and sometimes stopping it altogether; and often it causes impotency of the womb to conceive and to fructify. If this fibrous tissue be confined to the cervical portion of the womb it may be most effectually removed by amputation of the cervix, removing the parts involved. Other means are recommended and employed by many, such as the disintegration of the parts involved by galvano-cautery, the actual cautery, the injection of escharotics, etc. But they are far less reliable and much more painful and dangerous. Amputation of the cervix is attended with but little pain, and scarcely any danger at all, in skillful hands.

When the body of the womb is involved in this fibrous tissue it presents a far more formidable aspect for successful management; something may be done by general and local measures, by restoring to a full and healthy action all the functions of the body. As local measures of most value that I would mention is the extensive dilatation of the womb by means of tents, and then keeping it so for days and weeks and even months at a time, if necessary, by packing it with medicated cotton or soft, fine wool, and removing and repacking it every two or three days. As medicaments, I would advise solutions of chloride of zinc (say 25 to 40 per cent.), iodide of potass., iodoform, glycerin and tinct. iodine, etc. Electricity may, if well and skillfully applied, be of much value as an alterative agent. If this tissue be in circumscribed and isolated spots, forming localized tumors, then they may be removed by sufficient dilatation of the womb and enucleating the tumor, or by incising it from the cavity of the womb, and the constant use of ergot, until the tumor is virtually *squeezed* out of its life and habitation, being forced into the cavity of the womb and thus extruded from the body. If it be a fibro-serosus, of dimensions great enough and causing sufficient disturbance to require its removal, it will have to be done by an operation through the abdomen or the cul-de-sac of the vagina—if it cannot be taken up and removed by resorption, which can sometimes be done.

In case of muco-fibrosus, when the fibrous tissue is confined to the cavity of the womb, developing into a thickened corrugated mass, causing obstruction of the functions of the womb and acting as a foreign body, causing great distress and pain and great nervous reflex disturbances, it may be removed by a skillful and thorough use of the curette, and then packing the cavity with pledgets of cotton well medicated for a few days, and following that with suitable local applications to the cavity by means of lint wrapped on a probe.

In reference to the various forms of tumors involving the ovaries, broad ligaments, tubes, etc. (except those of malignant character), I am of the opinion that a very large per cent. of them may be either removed entirely, or so reduced and modified as to render them inert and harmless, by timely and judicious alterative treatment. And I mean, by alterative treatment, the persistent use of ergot, electricity, the iodides, bromides, and skillfully applied pressure, dieting, activity, etc., thus avoiding a great deal of the capital surgery and sterilizing of good women so readily resorted to in these modern days of cutting. When the tubes are involved in accumulations of serum or purulent matter—hydro- or pyo-salpinx—do not open the woman's abdomen, and mutilate and sterilize her for life by the removal of her ovaries or Fallopian tubes, until you have at least tried a more conservative and less dangerous and damaging course of treatment for her relief.

As I have suggested before, the uterus being so fully and so completely at our command and under our control, so easy of manipulation, affording such comparatively easy and ready access to the Fallopian tubes, let us dilate the womb and sound the tubes by means of instruments suitably constructed for that purpose, and see if the fluids may not be drawn off through the uterus; and if so, and when it has been done, then institute treatment for a final cure of the case, by the application of proper therapeutics. Fine catheters, of sufficient length and quality, can be easily constructed, by which medicines can be carried to any point of the tube. But, if you say that the tubes are too small for any such practical uses, I answer that if Kelly and others can catheterize the ureters to the kidneys and draw the urine from its fountain-head, then why not dilate the Fallopian tubes, explore and institute such therapeutics as may be required for the relief and cure of the case in hand? I claim that it can be done with at least as much, if not more, ease and facility than the catheterization of the ureters can be done, because the tubes are more accessible than the ureters, and susceptible of greater dilatation, and with much greater comparative impunity. And I hope the true gynæcologists of this age will take advantage of this new medium (?) for relieving that class of ills for which the female is now solely committed to the knife, with all its dreadful fatality, even under the great advantages of modern scientific progress. But there is another thought to which I would invite special attention, and that is the mental and moral influences brought to bear upon the mind and destinies of the female evolved out of the diseases of her sexual organs.

As I have already stated, the womb and its annexa constitute a focal center of centrifugal nerve forces, which exert their effects upon the spinal column, the brain, and thence to every

nerve-center and fiber of the whole organism. The peculiarity of the sexual system is what constitutes the "woman." It is through this medium that she becomes distinguished in all her movements and demeanor in life. If there be any very great arrest of development in her sexual organs, she ever remains simply a sort of grown-up girl, showing but little of the natural instincts characteristic of the well-developed woman; her voice is girlish; the society of girls is more congenial to her than is that of women. Her intellect is generally dwarfed, and her eyes never have the charm and luster of the woman; her relish for the male sex is automatic, if there is any at all, always feeling like as if there was something lacking in her that is common to others of her sex, and it is exhibited in her facial expressions and actions. If her sexual system is well developed she emerges rapidly out of the girl into the young lady from puberty, and there is a womanly charm and beauty of features and a luster in the eye that makes her attractive, and a tone in the voice that makes her a conspicuous center of interest in society, attracting the opposite sex to her with a power that the undeveloped female is a stranger to. As her female organs develop into full capability of performing their functions, her womanly characteristics begin the more and more to show themselves in her reserved modesty and refinement, showing the greater tenacity for the protection of her virtue and womanly instincts. Virtue to the true woman is of priceless value, she preferring to sacrifice her life rather than her virtue. So, no wonder that when the great center of her "woman-life" is invaded by disease that these centrifugal forces should be sent forth at once to the brain headquarters; that the intellect should take cognizance of the fact and contribute to a relief from the invasion. And if relief does not soon come, the tension is kept up until the nervous system becomes so charged with nerve force and the tension so quickened that shock and explosion ensue on the slightest additional excitement; and if some measures are not brought into requisition that will afford relief from the disease and the tension relieved the system becomes exhausted, and the moral effect upon the mind soon becomes manifest in hysteria, melancholy, hysterical mania, and, if still continued long enough, some form of insanity will ensue, which, if not relieved by some skillful means very soon, she, like the storm-wrecked ship far from land, goes down to rise no more.

I have had many cases in my practice that fully illustrate the logic of these statements; cases that have become low-spirited, hysterical, and melancholic; conditions which would continue under all treatment until the sexual troubles were corrected by proper treatment, when the woman would soon recover her wonted health and mental soundness.

A young lady about sixteen, while going to school, became so very melancholic and irritable that she could be controlled only by an uncle, and he had to confine her in her room alone. No treatment seemed to benefit her condition in the least. She lived about sixty-five miles away, but I was called to see her, and upon examination I found considerable abrasion of the os, some congestion, and a good deal of irritation of the womb, for which I applied local treatment, and gave her pot. brom., three grains, with tinct. cannabis ind., three drops, in water, *ter die*. In a very short time she began to improve, and soon fully recovered and resumed her place at school all right, and so remained.

Miss S., aged about twenty-two, became badly deranged in mind, which grew more and more pronounced, refusing to yield to any treatment instituted for her relief. Finally, I was called to see her at her home, about seventy miles from where I lived. Upon examination I found the womb inflamed and abraded, giving off a profuse discharge of leucorrhœa, and a very extensive and intense pruritus vulva. I made some local applications to the diseased womb, ordered suppositories of cotton saturated with medicated glycerin to the womb, to be changed daily, and hot soap-sud douches night and morning freely. I ordered an ointment composed of hydrarg. ox. rub., six grains; hydrarg. ammon., six grains; cerate simp., four drachms; mix to be applied to all the parts involved in the pruritus, which, of course, produced considerable soreness and swelling for a time, but the disease gave way and the mind soon recovered, and, so far as I have learned, no further disturbance of her mental functions have ever appeared.

Miss L., aged nineteen, was troubled for some time with her menses; her nervous system began to show evidences of unusual irritability, and at each menstrual epoch her excitability grew worse and worse, and finally epileptiform

seizures were developed, increasing in severity and duration at each crisis, until she would have one fit after another in quick succession for one or two weeks, remaining utterly unconscious the whole time. After the convulsions would cease, she would begin gradually to recover her mind until the next menstruation, when they would again set in with increased severity, and continuing from two to three weeks, holding her in a complete demented state, thus leaving her but a few days in each month with any sort of mental consciousness at all; and that of a very feeble and unsatisfactory sort, until all hope of relief ever coming was wellnigh despaired of, till death should close the scene. Finally, her father brought her to me, about forty-five miles, in a wagon; and being in limited circumstances, he only remained with me two days and a half. I found the womb in a displaced and inflamed condition. I corrected the displacement and ordered hot-water vaginal douches to be used twice daily freely, and medicated suppositories, per vaginam, to be changed also twice daily. I also ordered good uterine tonics, combined with pot. brom., ten grains; ammon. brom., ten grains; tr. cannabis ind., three drops, to be given in water, *ter die*. She soon began to improve, and was fully and happily restored in body and mind in a few months' time.

Miss S., aged 20. Had complained of pain in left side for a considerable time, evincing a good deal of nervousness at the catamenia; then would cry and laugh inordinately, when there seemed to be no cause for so doing; then would hold excited and incoherent conversations with imaginary beings. Finally she became frantic, and broke out into the most furious acute mania, screaming at the top of her voice, foaming at the mouth, tearing her dresses to shreds, and rushing wild and raving out of the house, requiring several persons to hold and keep her indoors. No treatment controlled any of her symptoms, though various good physicians were consulted in her behalf, and she was carried from one state to another, and finally placed in an asylum for the insane, where she remained under treatment for months, without relief. Finally, she was brought to me, when upon examination I found retroversion and prolapsus of the womb, with endometritis. I gave her local treatment to relieve the morbid condition of the womb, replaced the organ, and adjusted a suitable pessary to hold it *in situ;* ordered hot douches and placed her on constitutional treatment, containing uterine tonics, alteratives, antispasmodics, anodynes, etc., and in a few days she began to show signs of improvement, which continued with increasing favor, and was discharged perfectly well in a few weeks' time; so it is evident to my mind that most of the insanity of women is due to some derangement of the sexual system, and the reason that many of them do not get well is because they do not have the services of a thoroughly skilled and practical gynæcologist, who could properly diagnose and relieve their sexual troubles, which give rise to the mental aberration. Nearly, if not all, of the cases of puerperal insanity—so many of which die without relief—are only additional evidences of the truth of the above statements, many of which, I think, could be sound and cured, simply by the appropriate understanding and timely treatment of the cases. To be successful in the treatment of such cases requires not only an alienist, but a gynæcologist, to manage and treat them successfully.

1123 WALNUT STREET.

ADDRESSES.

ADDRESS BEFORE THE ANTI-VIVISECTION SOCIETY.

BY W. R. D. BLACKWOOD, M.D.,
PRESIDENT.

(Delivered at the Annual Meeting, January 30, 1888.)

I DO not wish to make any extended remarks upon the objective work of this Society, for that is already known to you. I believe that the practice of vivisection is the one great stigma upon the otherwise fair fame of medicine, and I say this well knowing that many unthinking medical practitioners suppose that the great advance made in the recognition of the causes of disease in the last twenty years is due largely to the work of the so-called practical physiologists,—a very great mistake, indeed; for of all men these are the least practical and the most visionary in their ideas of all real students of medical progress. For lack of better original matter many medical journals reprint from their official organs the reports given by these experimenters, and as they are not specially modest in their claims (for they ride their hobby on every occasion likely to influence the profession or the public) it is no wonder that

many physicians are misled; for they look with great respect on reported medical news in general and the fulminations of writers of supposed high standing in particular in the periodicals which they prefer, and which to them are, in many respects, guides in practice. It is not alone in the department of diagnosis or recognition of disease that these experimenters make their boldest claims; but, the science of therapeutics which treats of the action of remedial agents upon the human system having made specially notable progress lately, they assert that but for their humane labors little would be known of the matter as it now stands, and that without their aid we would still be groping in the dark, as did our forerunners.

The signal advance in therapeutics alluded to has resulted not from the studies of experimenters in any department of medical science so far as the discovery of the cause of disease and the action of new remedies or the new applications of older ones is concerned, but it is largely due to the improved methods of preparation of long-standing and tried agents by skillful pharmaceutists and the importation by them of drugs peculiar to other countries, but unknown previously to us, the intrinsic merits of the drugs being thus better developed, and their administration being facilitated through increased palatability. Nowadays people take medicine readily because of this, and we obtain the desired results therefrom, whereas before this advance half or more of all medicine prescribed was never taken by the patient at all. Moreover, our friends of the infinitesimal school remedies have taught people to rely more than they did not long ago on the *vis medicatrix naturæ*—the power within us to throw off disease largely without drugs under proper diet and good nursing. All the credit due to these points has been claimed by vivisectors, who pretend to show that their discoveries of "heat centres" and "cold centres" and "motor areas" and "sensory areas" are the levers that lift the invalid from the verge of the grave. It matters not that the German professor in his laboratory, his nerves unhinged with tobacco and his brain befuddled with beer, locates these points in one place, whilst the English and American explorers find them elsewhere. They are somewhere; and latterly the "centres" for this and the "centres" for that have become almost as numerous as the centres were for the Molly Maguires in the valleys and hills of black diamonds in Schuylkill County after the war. Be it remembered that these researches are not prosecuted by vivisectors upon such animals as even approximately approach human structure, nor by their students who repeat unhindered the mutilations. They are made upon frogs, cats, dogs, and rabbits, with an occasional pig; and as these animals bear no resemblance anatomically or physiologically to man, or partake in the slightest degree of those mental or physical attributes which place him above the beast in his habit, his work, or his aspiration, it is to many a question whether if, as a gentleman suggested to me, the action is not merely a continuance of the morbid curiosity and cruelty which prompts some children to tear the legs and wings off insects. How can any supposed discovery concerning the life or action of the brute, or as to the effects of drugs upon him, teach us anything concerning human life? Not one iota of evidence can be adduced to show that any light has been thrown by such experiments upon accurate physiological knowledge from the beginning to the last of such investigations. Dogs and cats are abundant; boys are readily taught to steal them wherever they can lay hands upon them; however valuable the animals may be intrinsically, or however evident their being well-loved and cherished pets, once caught their doom is sealed without compunction, and the receivers, who are worse than the thieves in common law, laying aside the moral question, get material cheaply, and that is all of it. The objective point in nearly all vivisectional work has no bearing upon any probable or possible position in which man would willingly be placed, and the results thereof of such experiments cannot avail us as being helpful. Take the dog tied immovably to a board, his head shaved in one case, or his skull sawn off in the other, laying bare his brain, and then exposed to the rays of a July or August sun, with or without concentration by a burning-glass, and note the result. What else could it be than death, and why the atrocious cruelty which causes it, when from all time sunstroke has been feared by the civilized and savage alike in hot climates? The treatment of heat-stroke was known long before such experiments were begun, or at any rate long anterior to any records of such procedures. The difference between sunstroke from exposure

to the direct solar rays and heat-exhaustion from crowding in tents or bomb-proofs with no ventilation and improper clothing during our civil war was recognized, and instructions were promulgated and followed in the medical corps for the differential treatment of each condition, whilst these wonderful discoverers were besieging the back yards of Philadelphia after cats and dogs.

I had numerous instances of either condition in the military division under my professional charge, and my subordinates were instructed as to their duty, I having learned the difference from my preceptors in the University before the war,—Dr. J. J. Woodward, afterward so distinguished in micro-photography in the Surgeon-General's office, and Professor Henry H. Smith, afterward Surgeon-General of Pennsylvania, and who now is respected and honored throughout the civilized world; yet these gentlemen were not vivisectors. Why, then, the necessity for baking dogs and rabbits in ovens long after the period named, and long after appropriate remedial measures in each condition were practiced in the Pennsylvania Hospital?

Is it reasonable to suppose that any doctor with any brains at all would deliberately inject pepsin or pancreatin into any person's blood-vessels as a medicament? And yet we have been surfeited with accounts of the fever produced and the convulsions secured in animals by such means. What does such work prove for the good of humanity, and why need it be the craze for numerous imitators?

Have we lived so long in this world, and have accidental contusions of the abdomen been so rare as to demand that forty-four dogs must have weights varying from six to twenty-one pounds dropped on their stomachs from differing heights of four to seven feet? Has it not been known to every one that blows upon this region are peculiarly dangerous? And does not every student know that ruptures of the contained viscera are consequent upon such violence, and that death is produced by shock or through hemorrhage? Prior to the time of Hippocrates or Galen the truth of this was fully appreciated, yet we at this late day are gravely informed of the fact as though no one but the operator did not know it before.

Are railroad accidents so infrequent, and is "railway-spine" so rare after them as to compel some philanthropist disguised as a vivisector to break the backs of a hundred dogs by dropping them on iron gratings from altitudes sufficient to fracture and dislocate the spinal column; and did it need this truly Christian work to teach us that paralysis and death is the inevitable result of such mutilations? I don't believe it, and neither do you when you take out your accident policy before you start for Germantown or San Francisco.

The acuteness of the suffering in all these dogs is reported as being more or less severe according to whether or not they were under the influence to any degree of ether. This brilliant discovery may induce progressive railroad corporations to fully etherize passengers just before collisions, but in no other way can it conduce to the public good.

In the days of trial by fire persons blindfold were at times compelled to walk in bare feet over red-hot bars of iron strewn in their path, and the amusement has been ascribed to others of more Puritanical beliefs since that time. It appears from good testimony that unless they missed all the bars their feet were burned, but within a year a dog has been compelled to walk along the top of a kitchen-range, where he had no chance of any other path than hot iron on which to tread, and this was an experiment intended to advance medical science! Does it? If so, how? The proper study of mankind is man, and to benefit man you must experiment on him alone—if he will let you. Here is the true ground to be tilled by these explorers of hidden mysteries. Let them work upon each other, and if accidents should happen we have the satisfaction of knowing that "there is a Divinity that shapes our ends, rough-hew them how we may"—and that they never will be missed! So long as a dog enjoys carrion—a cat digests the fur of a rat or the feathers of a bird equally with its flesh and viscera—whilst a pigeon gets fat on opium and a goat plump on stramonium, a tomato-can, or a theatrical poster—when the frog thrives on the miasm of the swamp, and a pig cares as little about rattlesnake-poison as a vivisector does about the sixth and eighth commandments—just so long will sensible people, including doctors who dare to think for themselves, refuse to believe that experiments and their results upon such animals have any bearing upon themselves.

In these times of competition and battle for bread the general public is difficult to influence in matters not directly concerning its welfare, and the medical profession is for much the

same reason indifferent to the work of this Society, although many of the thinking members are at last awakening from their lethargy, and are investigating the matter uninfluenced by the sophism of so-called practical physiologists. When it is learned that the prominent vivisectors, especially those abroad, are simply experimenters in the laboratory and too ignorant to professionally attend their own or other families when ill, the value of their disquisitions will be heavily discounted, for there is a wide distinction between theory and practice in medicine. When the blind lead the blind, both fall into the ditch together. The services of a physician are needed only by those who are out of health—those in a pathological condition, and these conditions can only be studied to our advantage at the bedside of the sick. There only can the good or bad effect of all remedies be learned, either on a symptom alone, or on the conjoined evidences of disease as a whole. Many such studies establish definite lines of treatment, varied slightly, it may be, by the advent of side-issues or complications. In the majority of all cases recovery is the rule, but as man is fallible some unfortunately are lost. Then the art of the morbid pathologist comes in, and through his irksome, his skillful macroscopic and microscopic studies,—studies in which the distasteful aspect is subordinate to the ever-present danger through septic poisoning, and with the humane desire to benefit his fellows,—we see for ourselves what the actual lesion was; why we failed to meet the demand made; and how to do better in the time to come. Practical work of this nature meets the requirements of patient and physician alike, and the knowledge thus gained from the study of a single case, ante- and post-mortem, does more to enlighten the general practitioner or the specialist than all the theoretical suspicions of a hundred vivisectors would in a similar instance; whilst the combined results of a dozen ordinarily intelligent practitioners so studied and recorded for one year are of more real worth to us in handling disease in man than is the entire speculative vivisectional work of all kinds and on all kinds of the lower animals, from the time when the first experimenter disgraced his name till the present moment. Experiments and their results on healthy lower animals have no bearing on the ills which human flesh is heir to.

As an examble of legitimate induction from study at the bedside and post-mortem confirmation, I refer to a lecture delivered by Dr. Mathias Duval, Professor of Zoölogical Anthropology, on the brain. He referred to the discovery of Paul Broca, viz., that each convolution would appear to be a distinct organ, and in prosecuting his researches in this direction he had more than one opportunity of verifying that which appeared a mere hypothesis. While surgeon of the Bicêtre Asylum, a man who for several years had lost his memory for words was admitted into the asylum, where he died. At the autopsy M. Broca discovered that a chronic softening had destroyed, on the left frontal lobe, the posterior half of the second and third frontal convolutions. He concluded from this circumstance that the faculty of articulated language may have its seat in that region; but before pronouncing on the significance of this discovery he wished to await the confirmation of his induction. In a short time other cases presented themselves, which favored him in his researches. A patient who had become dumb was admitted into the asylum, and it was supposed that, the tongue being paralyzed, there was simply loss of the faculty of speech. In this case also, at the autopsy, the same convolutions as those of the first patient were found injured. In fine, the post-mortem examination of eleven persons, who had been accidentally deprived during their lives, some of the faculty of speech, others of the memory for words, or that for the letters of the alphabet, removed all doubt from the mind of the celebrated anthropologist that these faculties resided in the affected convolutions. On these premises, Professor Duval believes himself authorized to announce that "the mechanism of thought, and of its expression, appears to consist of a series of distinct cerebral organs, and that we might conceive the concatenation of their action."

This Society fully appreciates the magnitude and the difficulty of the work which lies before it. Its members are aware of the opposition made by medical teachers and those influenced by them to its labors, and of the efforts brought to bear toward suppressing public mention of its work and aims; whilst the official organs of our opponents stint no abuse, particularly when directed against those physicians who dare to maintain their opinion openly as to the absolute necessity for interference by law in this matter. Despite any and all means, honorable or other-

wise, to hamper the efforts of this body, it will keep steadily on until aroused public opinion shall compel recognition of the proper and legal restriction of a practice which fears investigation and dreads exposure, because it is *per se* cruel, unnecessary, and senseless so far as intrinsic value is concerned—one which blunts the finer sensibilities of its more educated prosecutors, whilst it degrades the mere followers and imitators who act from pure curiosity, without any expectation of unravelling the deep secrets which their teachers are supposed to possess.

It is worthy of note that in England, where under governmental control a license to practice vivisection is required, its prosecutors prefer the expense of working unrestricted on the continent; and the animus which impels them thus to show contempt of a law which had to be enacted to stem the tide of torture is evident.

The world is now eminently practical in its demands, and people expect improved results to follow announced discoveries, but in the two or three cases of so-called cerebral localization of tumor or abscess about which a deluge of literature good, bad, and indifferent has been printed, and which form the rock upon which a main work of the vivisectional fortress is at present founded, the old, old story applies; for whether it was the lesion, the accuracy of the localization, or the brilliancy of the surgery, the man died and was buried; but the result, whilst unsatisfactory to the ignorant public, is eminently comforting to the learned experimenters, who feel that their printed records must endure though the patient be forgotten.

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*THE SUCCESS OF ELECTRICITY FOR CURE OF INGROWING EYE-LASHES.**

BY J. B. TAYLOR, M.D.

AMERICANS may worship the practical too absorbingly. They certainly incline too much to pass slightingly over the reasons of things, for out of the reasons of things come often hints and keys to applied truth. Yet, after all, the practical is the end in view. In the slang of the day, "to get there" is our ultimate purpose in medicine, alike with all our other undertakings.

One other thought. The perfection of machinery and of methods always lies in simplicity. It is the universal history of all mechanical arts. First we beat about the bush and come into some sort of proximity to our object, awakening hope that we will yet attain it. Then we do the thing awkwardly and circuitously. As a rule, too, we pay heavy tariff for the doing of it. More correctly, we lay a heavy tariff on the patient in the shape of suffering and incidental damage. Finally we eliminate the difficulties, see our way clear to dodge the obstructions, and then we go at last straight and successfully to the mark.

At this stage we both smile and wonder at the random, coarse, inaccurate way in which we have previously attempted to do that which we finally do so simply and so easily.

As a thing of value for its practical success, and then again as an illustration of the identity of completed methods with simplicity, medicine has had no more striking example in any quarter than is found in the electrical method of destroying, and thus permanently curing, ingrowing lashes.

We all know what a problem this affection has been to the oculist—how much more of a problem to the general practitioner. We all know what a persistent, dangerous, self-propagating curse it is to the sufferer. Hamlet's metamorphosis of the world by which it became to him "a sterile promontory," and "this most excellent canopy the air," etc., "a foul and pestilential congregation of vapors," was not greater nor sadder than the transformation wrought in all things for the sufferer from trichiasis. The constant irritation to the ball is by virtue of its direct effects intolerable. Who that has been driven frantic by the unlucky catching of a cinder under the lid and its sweeping for a few hours over the ball of a sound eye will fail to appreciate by proxy (though faintly) the suffering which comes from the incessant ploughing of these maddening bristles across an eye made unspeakably sensitive by prolonged irritation? Resultant conjunctivitis ever kindled afresh, photophobia, hazy cornea, probably granular lids—what do we not have as a part or a sequence of trichiasis? It is not too much to say that, if not relievable, it is one of the most trying afflictions of life. It is one of the instances in which a very small thing becomes, in all of its bearings, a very great thing.

The cosmetic relations of the question, too,

* Read before Central Illinois Medical Association, November 23, 1887.

amount to much. Few of us have enough of beauty to afford to suffer any material subtraction from it. Seriously speaking, the thought of being an offence to our friends is a burden indeed to bear.

As to means of relief we all know that epilation is an unfortunate failure. The eye but begins to settle into moderate relief when back come the enemies of its peace, and, while yet too short for removal by the pincette, enter again upon their demon-like ripping up of the bulbar surface. The attempt to dissect out the offenders, root and all, with the scalpel, carries with it unpardonable faults. In the first place, much tissue must be destroyed which it is lamentable to sacrifice. If there are only a few offenders so coarse an instrument cannot isolate them. You must destroy not only good tissue but at the same time, as it stands in many cases, numbers of lashes which you do not wish to destroy. If well-nigh all the lashes be offenders, their removal not only impairs the integrity of form of the lid, but plays havoc with the Meibomian glands, and so causes loss of their useful function in forming a barrier against escape of tears from the eye, and in sweeping substances on the ball forward, by scythe-like motion of the lids, to the inner cornea. Hotz's operation and related processes for everting the edge of lid and so lifting lashes off of the ball, have their place for desperate cases of inversion; but where the lids lie normally against the ball, in the pure incipient cases of trichiasis, these are not suitable nor in the proper sense successful. One sees at once that an eversion of the lid so as to bring its edge away from proper contact with the eye is an infraction upon nature and a serious invasion of the regular function of the parts. We perceive that so far all these methods are bungling, indirect and inaccurate for the ordinary case. They have the defect of other immature methods as outlined in our introductory remarks.

In the more recent applications of electricity for this difficulty have we reached a more complete solution? Have we come to that simple, direct, easy method which bears the ear-marks of the matured process? It looks as if we may unqualifiedly say "yes." How any procedure could be more sure when followed out with dexterity, or more radical, or more free from collateral damage or censure it is beyond our power to see. Dr. George Henry Fox erected a most praiseworthy milestone in medical progress when he perfected the technique for removal of superfluous hair from the face for cosmetic purposes. Of incalculably greater use and importance is the extension of this process for removal of ingrowing lashes.

The method is simple enough to relate. Indeed it is so simple that unless we bring in review before us such considerations as I have presented we are liable to quite overlook its dignity and value. This is by no means a trite subject. The requisites for the operation are your ordinary galvanic battery of medium range of cells, your two conducting cords, one sponge electrode, and an assortment of finer to finest sizes of brooches carried in jewelers' stock. Your patient being on hand, you prepare your battery as in the usual way for administration of a medium constant current, with the single exception that you omit the electrode from the terminal end of the negative cord. This terminal end you arm with your delicate brooch. Many needle-holders with buttons for making and unmaking current are supplied by the instrument-makers, but they have proved in the writer's hands far more cumbrous and far less adapted to delicate manipulation than a simple mode of connection without such accessories, to which experience has brought us. The trouble with the handles is that they bring the fingers too far from the operating tip of your needle. In such an arrangement a very slight unsteadiness of the fingers sweeps the tip of the instrument over a wide arc, and makes it extremely difficult to find accurately entrance to the follicles. Our habit is simply to thrust the shank of the brooch well down inside the hollow cylindrical tip of the negative cord. We thus get thorough metallic contact and perfect conduction.

The flexibility of the cord, however, enables us to turn the point of needle in any selected direction; and the arrangement gives us a useful, short, and steady handle for our instrument.

The patient being seated before you, and you at the back in standing posture, you turn the face well upward, and, steadying the head firmly against the back of the chair or against your own body, carefully insert the brooch into follicle of the objectionable lash. Or, still better, you have the party lie on his back upon a sofa with the foot of the same turned toward a favorable window, and you seat yourself in a chair at its head. You thus have the patient before you in

a specially quiet and easy position. For yourself, you have the advantage worth mentioning of steadying your elbows upon the head of the sofa, or upon your own knees. This little manœuvre has proved of great value to the writer in the more difficult cases, and is always restful as compared with standing. The best method of manipulating the lid during operation (if it be the upper one) is by all means to evert it as in making applications to its under surface, and then hold it firmly with the thumb of the left hand. If you do not evert the lid there is great danger of diverting the needle from the line of the follicle and turning its point too much toward the conjunctival surface, thus probably forfeiting your success. You are now ready for the current to do its work. You have previously placed the handle of the positive electrode in the grasp of the hand of the patient on the opposite side from the eye on which you are operating. Upon a signal from you, he presses the damp sponge of this positive electrode into the palm of the unoccupied hand. In this way the current is made, and passing off the fine point of the inserted brooch, decomposes the bulb of the hair, and in a fraction of a minute this particular lash is disposed of. The practical test of completion of the process is this: When for a few seconds (say 15) the hydrogen gas liberated by chemical action at the negative pole has been frothing up like a miniature geyser, you may have the patient break the circuit by removal of the sponge from contact with his hand, and see by traction (either with needle *in situ* or withdrawn) whether the lash operated on can be plucked from its sac without resistance. If it comes readily without lifting the skin, the operation is complete, and the hair will not return. It is thoroughly easy, on the other hand, to apply the current longer, if necessary.

As to strength of current, if you are inexperienced or uncertain to what degree your battery may have run down, make a test by first operating on one or more hairs on the dorsum of the phalanges of your own left hand. In this case you need to insulate the tip held in the fingers of right hand by wrapping about it a bit of rubber cloth or scrap of silk, or even dry chamois-skin. When you have inserted the brooch (which act must always precede the following step) you can readily complete the circuit by applying the palmar surface of the left hand or fingers to the sponge of the positive electrode placed in some convenient situation. The weakest current which will produce distinct effervescence, as we may call it, is the one to be selected. Too much care can not be taken that your brooch is connected with the negative pole, lest in selecting the pole which attracts oxygen you form an oxide on your needle, and leave this as a permanent tattoo and reminder under your patient's skin. Many deserved maledictions have fallen upon the reckless or uninformed operator who disregarded this precaution. Some find it of service to use a magnifying lens for the better insertion of the brooch.

The points operated upon must not be closer together than one-twelfth of an inch, else the two pits may coalesce and leave a visible depressed scar. A series of sittings is called for rather than to violate this law. The pain of the operation is a trifle more acute in the lids than elsewhere in the skin, but is not serious, and the writer feels usually safe in promising that it shall not be greater for a given lash than the bite of a robust mosquito. In all cases water dressings are desirable to resist any tendency to inflammatory reaction, and, if many lashes have been removed, a compress bandage for 12 to 24 hours to restrain swelling.

At each operated point we have usually this series of appearances: First, a minute white pustule surrounded by an aureola of red; later, the red having paled out, a black speck from chemical changes in decomposed tissue; after about two weeks a disappearance of this, and return to normal color and characteristics. As a rule, when proper dexterity has been used (and a fair amount of this as well as practice is of course requisite), there is no mark left to show point of operation. Even if a minute white speck (cicatrix) be left, it will be such as will be observable only on the closest scrutiny.

The method is a success. We have given the details at such length only to show the conditions under which it is a success. It meets a crying want among our remedial measures, and meets it well. It is worthy of all the discussion which is needed to make it plain, and to assure for it its proper place. It is most especially brilliant in those pretty frequent cases where there are two rows of lashes, and the offending ones belong to an inner and superfluous set.

In conclusion, allow testimony from accumulated personal experience as to the effectiveness

of this same method not only for removal of superfluous hairs elsewhere on the surface, but, in its substantial features, for destruction of moles and similar growths, for removal of pigment from defacing spots, and for the decided betterment of wine marks, acne rosacea, and such blemishes due to abnormal development of capillaries.

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*THE PORTAGIOUSNESS OF PHTHISIS.**

BY WILLIAM PORTER, M.D.,
Physician to St. Luke's and to the Protestant Hospital; Consulting Physician to the St. Louis City Hospital, etc.

GENTLEMEN: Before entering upon the discussion of the subject proposed, permit me brief reference to the terms employed.

I have chosen the word "portagious" because it conveys a more exact idea of the manner of transmission of phthisis, for reasons hereinafter mentioned, than either contagious or infectious.

In this writing the term phthisis will be used to denote that class of disease to which belongs the large majority of cases of slowly-progressive pulmonary inflammations,—*i. e.*, chronic tubercular phthisis.

Pardon me if I decline to enter into a discussion of the relation of the bacillus to phthisis. After somewhat closely following the investigations of recent years, I cannot conclude whether the bacillus is the cause or product of tuberculosis. Certainly no positive therapeutical gain has yet been made, based upon the hypothesis that the microbe is a factor of phthisis *per se*, but rather is our advance continually upon the old lines of aiding assimilation, diminishing waste, and caring for the hygienic surroundings. So far as our present knowledge extends the bacillus is to phthisis as smoke to fire; it may indicate its existence, but neither incites nori ntensifies the combustion.

Whatever the development of theory may do for us in the future, let us this evening limit ourselves to deductions made from recorded facts.

The question I would ask you is, Have we reasonable evidence that the products of, or emanations from, a phthisical subject may be carried to, received by, and cause like disease in one previously free from phthisis?

Believing that the weight of testimony is with the affirmative, I will offer the results of:—

1. Some experiments made as to the transmissibility of phthisis.

2. The practical experience of others, and—

3. Personal observations.

1st. In experiments made by Tappeiner in 1883, tuberculosis sputa being inhaled by eighteen healthy animals, tubercles in both lungs and pleura were afterwards found in seventeen.

That record of Koch's work found in the second volume of the "Imperial Health Reports" shows that after the inhalation of material from phthisical cavities the rabbits and guinea-pigs under observation had within twenty-eight days tubercles throughout the lungs of all, and in the liver and spleen of some. It is true that many of the masses in Koch's description resemble caseous broncho-pneumonia, but this is also to the point according to the definition of phthisis which we hold.

Wargunin, of St. Petersburg, in 1884 showed by experimental research in three series or cases that the nodules of broncho-pneumonia resulted not only from the inhalation of phthisical sputa, but also from other foreign substances.

The proposition that tuberculous phthisis is an infective malady was endorsed twenty years ago by Villemin and Chaveau, who labored to demonstrate that inoculation of tuberculous matter only would produce tubercle, while Sanderson, Fox, and others claimed the same result from the introduction of other material.

Martin, of Paris, within the last few years, however, after a number of experiments which I may not detain you to describe (Rev. de Médecine) seems to have established the following conclusions:—

(*a*) "Tubercle inoculated locally determines, after incubation and variable time, general tuberculosis, and the virus seems to acquire increased activity by inoculation in series of animals of the same or allied species.

(*b*) "But, if we inoculate matter obtained from those tubercles secondary to the injection of non-tubercular foreign bodies, it never gives rise to general tuberculosis, and after two or at most three terms of the series it even loses the power of producing a local inflammation."

Though we were to admit that Wargunin, Sanderson, and Fox have found tubercle to result from inoculation with non-tuberculous material, we would still be justified in maintaining

* Read before the Medical Press Association of St. Louis, Mo., Jan. 30, 1888.

that the inhalation and absorption of phthisical matter is a potent cause of phthisis.

The carefully conducted investigations of Cadeac and Mullet, recently published, show that while no positive result was obtained from compelling rabbits and guinea-pigs to inspire air exhaled by phthisical patients, yet when air was used collected from near the beds of hospital inmates, the air presumably carrying particles of sputa, two out of twelve guinea-pigs acquired tubercle.

Permit me to refer to an experiment of my own.

Three healthy guinea-pigs were selected. One was inoculated with phthisical sputa and placed in a small box with one of the others. The third was confined in a box in an adjoining room. They were cared for alike and had similar food. In four weeks the first one died, and the examination showed tubercle in the lungs and a large cheesy gland near the point of inoculation. Three weeks after the second animal sickened and was killed. I found small granulations scattered through both lungs, at some points aggregated, and in the right lung were two nodules having a soft, cheesy center. The third guinea-pig examined three months later had no evidence of tubercle or other disease.

The only experiment, so far as I know, upon a human subject was made by Drs. Demet, Pararky, and Zallories, of Syra, in Greece, who inoculated with sputa from a phthisical patient a man whose history afforded no suspicion of tubercle, and whose lungs were healthy, but who had gangrene due to femoral embolism, and who would not permit amputation. In three weeks auscultation revealed evidences of disease at the right apex. Thirty-eight days after the inoculation the man died from gangrene, when it was found that the upper right lobe had seventeen small tubercles and two granulations in the apex of the left lung.

2d. What has been the practical experience of others?

One of the most valuable labors of the Collective Investigation Committee in London is that relating to the transmission of phthisis. While the majority of replies to inquiries were unsupported negatives, two hundred and sixty-one answers coming from physicians in family practice affirmed the proposition that phthisis may be communicated from the sick to the well, and evidence was given in proof of the statement. One hundred and ninety-two observers recorded cases where both husband and wife became phthisical, in one hundred and thirty cases there being no phthisis in the family of the one to whom the disease was thought to have been transmitted.

Some of these cases were very interesting. Dr. Spriggs, of Great Bedford, instanced the case of Miss R., aged 48, a dressmaker, who, living in rather a lonely cottage at C., Bedfordshire, had three apprentices, young girls from 17 to 19 years of age, not related, from three adjoining villages, who took it in turn to remain in the house and sleep with her, each one week at a time. During their apprenticeship, Miss R., was taken with phthisis, of which she died. In less than two years afterward all three apprentices died of phthisis, although in the family history of each no trace of phthisis existed; and the parents, brothers and sisters of two are alive and well at this time.

Another interesting case is related by Mr. G. F. Blake, of Mosely, Birmingham, in which a perfectly healthy child, with a family history free from all trace of tubercle, is reported as becoming infected by a phthisical nurse, and having died with profuse hæmoptysis, after the disease had run a rapid course.

The following cases were reported to the Clinical Society of London by Dr. Herman Weber:—

"A young man who had lost his mother, two brothers and a sister of phthisis, and who himself had twice had hemorrhage from the lungs, had quite recovered, and married at 27, being then perfectly well. His first wife was in good health, and came of a healthy family. She died of consumption after her third confinement. The man shortly married again, an 'apparently healthy woman,' and this second wife, after a year of married life, died of 'galloping consumption.' He again married a healthy young woman of 25, belonging to an 'exceptionally healthy family.' During her second pregnancy she developed symptoms of phthisis, which ran a rapid course and ended fatally in about eight months. Undaunted, this man married a fourth wife, a perfectly healthy woman of 23, of healthy antecedents. Three months after her first confinement she began to show symptoms of phthisis, and, notwithstanding two sea-voyages, died after nine months, with tubercle in liver, spleen, and intestines, as well as in the lungs. Though the husband of these four wives, who was a sailor,

remained in apparently good health, physical examination revealed the existence of morbid changes about the apex of the left lung.

"It is possible that the life at sea kept his disease in abeyance; for when he had to lie by on account of a severe fracture the disease became active, and he died of consumption within two years."

A convincing report of a case in which the portagiousness of phthisis is affirmed served as an introduction to a valuable paper last year by Dr. F. I. Knight, of Boston, and who has not read the evidence offered upon this subject by Webb.

I need not farther collate records, for you, gentlemen, being conversant with medical literature, will grant that new and strong proof of the proposition which we have announced is being constantly given.

3d. What have been our own observations?

In more than three hundred cases of phthisis I have kept a record of the family history, and find that fifty-one per cent. of this number were of families in which some other case had occurred. The inquiry extended no farther than to first cousins. Heretofore this would be accepted as evidence in the favor of the heredity of phthisis, but I now believe that in many of these cases the disease was acquired by the carrying of the products of disease to a subject whose physical condition favored its reception and development.

I recall the case of Mrs. L., in whose family was no trace of phthisis. Before her marriage and for several years after she was the ideal of a healthy woman. Two children were born. Her husband, a well-known city official, had phthisis. Her attendance upon him was constant, and for some months before his death she and the younger child were with him night and day. When called to attend him I found that he had been substituting for the ordinary cuspidore a newspaper spread upon the floor at his bedside, and this would be loaded with sputa each morning.

The case was rapid. The husband died, and within eighteen months Mrs. L. and the younger child also died, from phthisis; while the elder daughter, who was comparatively little in the sick-room, still lives and is well and strong.

I have the notes of other instances almost as instructive, but this will suffice.

From such facts as I have endeavored to give in this paper, I believe it is fair to concede the probability of the portagiousness of phthisis.

How, then, can the disease be conveyed?

In two ways mainly. First, by air carrying particles of disease into the respiratory tract. Second, by food from infected sources, through the alimentary tract.

The first of these propositions is, I think, proven. Not only are the experiments and records here given powerful affirmations, but there is in the profession a steadily increasing belief in its truth which would require much more negative testimony than has yet been offered.

I would not be misunderstood. I do not think that as yet we can sustain the statement that phthisis is contagious—acquired by mere contact; or infectious, if the term be limited to imply a hidden, subtle miasm communicating the disease; but I do hold that particles of matter from the site of disease in a phthisical patient may be carried, planted in suitable soil, and incite phthisis. I cannot think that all are liable to so acquire the disease.

I would go farther and say that probably only those may so contract phthisis who by reason of lowered vitality, through previous sickness or long watching in the sick-room, or those who have local congestion or inflammation in the respiratory tract. The fixation of a minute particle of dried sputum from a phthisical cavity upon a point of irritation in the respiratory tract of a non-phthisical patient may constitute an effective inoculation. This leads me to express my belief in the possibility of auto-inoculation—in so far as the débris from a tuberculous lung coming in contact with the larynx denuded of epithelium may cause laryngeal tuberculosis.

The second proposition, that phthisis may be caused by eating the flesh of tuberculous animals or drinking the milk of tuberculous cows, may also be received with the same limitations as the first, *i. e.*, that there are conditions which favor the development already existing in the individual; and, as Mr. Law of Cornell University has well said, this embraces such a large class that the interests involved are almost illimitable.

I will not detain you by detailed suggestions as to our duty if the position maintained in this paper be true. There should be frequent

change of the atmosphere in the sick room, complete disinfection of all clothing or vessels holding expectorated material, and the close confinement of any relative of or attendant upon a phthisical patient should be forbidden.

I also believe the day is at hand when the physician will recognize that it is as much his duty to examine the food that his patient eats, or the milk that is ordered for the sick child, as it is his province to see that the drugs he prescribes are pure and well compounded.

2830 Locust st.

THERAPEUTIC NOTES.

DIPHTHERIA.

Dr. Pirnat orders the following preparation as a gargle :—

℞. Acid. carbol. . . . ƒ℥ss.
Ext. eucalypti glob. fl. . ƒ℥x.
Ext. pini Canad. . . . ƒʒij.
Glycerinæ . . . . ƒʒij.
Aquæ . . . q.s. ad ƒ℥viij.

M. Sig.—Gargle well every two hours, for ten minutes each time, before taking the medicine.

For children :—

℞. Tripsin. . . . . ℥ss.
Sodæ bicarbon. . . . ℥ss.
Hydrarg. chloridi corros. . gr. ¼.
Glycyrinæ . . . . . ƒ℥j.
Aquæ rosæ . . . . . ƒ℥vij.

M. Ft. sol.

Sig.—Spray every time before medicine is given.

Or,—

℞. Acidi lactici . . . . ƒ℥ij.
Hydrarg. chloridi corros. . gr. ss.
Glycerinæ . . . . . ƒ℥ij.
Aquæ . . . q.s. ad ƒʒiv.

M. Ft. sol.

Sig.—Spray each time before giving the medicine, applying a cloth dipped in cold vinegar (not too wet) to the neck.—*Medical and Surgical Reporter*, January 28, 1888.

SODIUM IODIDE IN PHTHISIS.

Dr. Potain (Bull. Gen. de Thérap.) finds the following of value in the treatment of phthisis :—

℞. Sodii chlorid. . . . ℥iiss.
Sodii brom. . . . . ℥j. gr. xv.
Sodii iodid. . . . . ℥r. vss. giij.
Aquæ destil. q.s. ad ʒiij. ℥j.

M. Sig.—Dessertspoonful every morning in a glass of hot milk.—*Medical Standard.*

TREATMENT OF FRECKLES.

The following are useful formulæ :—

℞. Acidi salicylici . . . . ℥ss.
Spiriti myrciæ . . . . ʒij.

Sig.—Apply night and morning with a soft rag or sponge.

℞. Acidi salicylici . . . . ℥ss.
Hydrarg. ammoniatæ . . ℥j.
Ungt. aquæ rosæ . . . . ʒj.

M. Ft. ungt.

Sig.—Apply at night. During the day a lotion of corrosive sublimate (gr. j.–ʒj) may be applied two or three times.

These applications will soon produce a slight scaling and roughness of the skin, which is easily subdued by glycerite of starch. Should the skin become red and irritated the applications must be intermitted until the irritation subsides.

Should a stronger application be needed the following, recommended by McCall Anderson, may be tried :—

℞. Saponis viridis . . . ʒij.
Sp. vini rectificati . . ʒj.
Hydrarg. bichloridi . . gr. vj.
Ol. lavandulæ . . . gtt. x.

M. Solve et filtera.

Sig.—Apply at night and wash it off in the morning

This will generally be found too irritant, however, for a skin that freckles. Glycerine lotion or glycerite of starch should be used during the day.

In slight cases the following lotion of borax and chlorate of potash answers the purpose very well :—

℞. Sodii boratis . . . . ℥ij.
Potassii chlorat. . . . ℥j.
Glycerinæ . . . . ʒss.
Sp. vini rectif. . . . . ℥ij.
Aquæ rosæ, . . q. s. ft. ʒvj.

M. Sig—Apply with a soft sponge several times a day.—Dr. George H. Rohe, in *Maryland Medical Journal.*

INCONTINENCE OF URINE.

To a boy of five years, with incontinence of urine, Professor Atkinson gave—

℞. Extracti ergotæ fluidi . ƒ℥j.
Tincturæ nucis vomicæ . gtt. xvj.
Syrupi simplicis . . ƒʒiss.

M. Sig.—Teaspoonful *ter die.*

The dose to be doubled in a day or two if necessary.—*Medical Times*, February 1st.

THE TREATMENT OF DYSENTERY.

℞. Olei ricini . . . . fʒj.
Tinct. aconiti radicis . gtts. iv.
Olei cinnamomi . . . gtts. ij.
Pulveris acaciæ, q. s.,
Aquæ distillatæ, q. s., ad. fʒij.
M. Fiat emulsio.

Sig.—Half at once; remainder in an hour or two.

℞. Magnesiæ sulphatis . . ʒvj.
Vel. sodii phosphatis . . ʒvj.
Vel. magnesiæ (trit.) . . ʒij.
Vel. magnesiæ citratis . . ʒvj.
M. Sig.—Half at once; remainder in an hour or two.

One hour after one of the foregoing combinations has been given I prescribe the following:—

℞. Quininæ sulphatis . . grs. xxij.
Ext. aconiti radicis fluidi. gtts iij.
Massæ hydrargyri . . grs. viij.
Pulveris opii . . . grs. iv.
M. et div. in capsules No. 5.

Sig.—One capsule every two or three hours as indicated

If fever is high and tendency to delirium exists, in conjunction with the last formula the following may be given, particularly to children:—

℞. Sodii bromidi . . . ʒiss.
Tinct. aconiti radicis fluidi gtts. viij.
Vini ipecacuanhæ . . fʒss.
Sacchari . . . . ℈ij
Aquæ . . . . fʒj.
M. Sig.—Teaspoonful two to four hours.—Dr. E. J. Beall, in the *Texas Courier-Record.*

THE TAPE-WORM CURE.

Dr. Bettlehein recommends keratinized pills, made after the following formula, for tape-worm:—

℞. Ext. filii. mar. æth.
Ext. punic. granat. . āā 150 grs.
Pulv. jalap . . . . 45 grs.
M. F. pills (keratinized) 70.

Of these he gives fifteen to twenty to an adult on the fast-day before the day of treatment, and on the day of treatment the rest within two or three hours.

Purgatives should be given on the fast-day, and on the day after the pill should be given from seven to nine o'clock. If necessary, an enema should be used to aid in emptying the bowels.—*Amer. Practitioner and News*, Jan. 21, 1888.

TREATMENT OF FECAL ANÆMIA.

Sir Andrew Clark prescribes a ferruginous cathartic to be taken twice a day, about 11 A.M. and 6 P.M. Usually it is an acid, mixture, somewhat as follows:—

℞. Ferri sulphatis, gr. xxiv. ad gr. xxx.
Magnes. sulph. . . ʒvj.
Acid. sulph. arom. . . ʒj.
Tinct. zingiberis . . ʒij.
Vel. syrupi zingiberis . ʒvj.
Inf. gent. co. vel. quassiæ. ʒviij.
Fiat mist.

Sig.—One-sixth part twice daily, about 11 A.M. and 6 P.M.

Occasionally this acid mixture produces sickness, dries the skin, and is otherwise ill borne. In such circumstances I prescribe an alkaline cathartic mixture:—

℞. Ferri sulphat., gr. xxiv. ad gr. xxx.
Sodii bicarbonat. . . ʒij.
Sodii sulphat. . . . ʒvj.
Tinct. zingiberis . . ʒij.
Spirit. chlorof. . . ʒj.
Infus. quassiæ . . . ʒviij.
Fiat mist.

Sig.—One-sixth part twice daily about 11 A.M. and 6 P.M.—*College and Clinical Record*, February, 1888.

FOR IRRITABLE BLADDER.

Dr. W. P. Chunn writes to the Maryland Medical Journal, Jan. 28, 1888, that the following prescription has been found to allay incessant desire to urinate and irritable bladder when due to phosphatic deposits in the urine:—

℞. Acidi benzoici . . . ʒij.
Boracis . . . . . ʒiij.
Aquæ . . . . . ℥xij.
M. Sig.—Tablespoonful three times a day.

This mixture has upon two occasions acted so efficiently in what was thought to be cystitis that cystotomy was dispensed with.—*Medical and Surgical Reporter*, Feb. 11, 1888.

REMEDY FOR WARTS.

℞. Salicylic acid,
Alcohol, . . . āā 2 parts.
Sulphuric ether . . . 5 "
Collodion . . . . 10 "
M. Sig.—The warts are to be painted with the solution daily.—E. Vidal.

NODULATED TUMOR IN THE AXILLA.

Dr. Morris uses the following ointment:—

℞. Potassium iodide . . . ʒiss.
Water . . . . . fʒiss.
Lanolin. . . . . ad ʒj.
—*N. Y. Medical Journal*, February 11, 1888.

PREPARATIONS TO DISGUISE THE BITTERNESS OF QUININE.

I. Aromatic elixir of glycyrrhizin.

℞.	Ammoniated glycyrrhizin	1 troy oz.
	Sugar	3 lbs. av.
	Water sufficient to make	5 pints.

Make a solution and add the following mixture:—

℞.	Oil caraway	4 minims.
	Oil coriander	4 "
	Oil anise	8 "
	Oil cassia	8 "
	Alcohol sufficient to make	2 fl. drachms.

Mix and filter.

II. Aromatic glycyrrhizin (in powder).

℞.	Ammoniated glycyrrhizin	4 drachms.
	Oil caraway	2 minims.
	Oil coriander	2 "
	Oil anise	4 "
	Oil cassia	4 "

M. Sig.—Reduce to a powder and mix thoroughly. One grain of this powder will completely mask the bitterness of two grains of quinine.—*Pharmaceutical Era*, February, 1888.

FORMULA FOR NAPHTHALIN.

Zouchard suggests the following:—

℞.	Naphthalin	gr. lxxv.
	Sacchari	gr. lxxv.
	Ess. bergamot	gtt. ij.

Div. in chart. No. xx.

M. Sig.—One powder ever hour.

The drug may also be given in gelatine capsules containing four grains each. It is an excellent antiseptic, and is generally very well borne, even to the extent of fifty to seventy-five grains daily. It has no effect upon the circulation, but is simply an intestinal antifermentative and germicide.—*Arch. de Pharm.; Therapeutic Gaz.; Southwestern Med. Gaz.*, January, 1888.

WHITE NETTLE AS A HÆMOSTATIC.

M. Florain claims that the white nettle (*alnium album*) has a hæmostatic value quite equal to either the great or little nettle (*Urtica dioica, Urtica minor*), and that when used in the form of a tincture internally, its effects are rapid and very marked. He prefers the following formula:—

℞.	Tincture of lamium alb.	ʒv.
	Simple syrup	ʒiiss.
	Water	ʒss.

M. Sig.—The dose for an adult is one tablespoonful every half hour until the hemorrhage ceases.—*St. Louis Medical and Surgical Journal*, February, 1888.

ONE MORE EMULSION OF COD-LIVER OIL.

In a very interesting paper by James Mackenzie before the Edinburgh Chemists' Assistants, and printed in the Pharmaceutical Journal, we take this portion:—

℞.	Powdered tragacanth	60 grains.
	Powdered acacia	90 "
	Bermuda arrowroot	60 "
	Cod-liver oil	6 fluid ozs.
	Water	6 "
	Spirit of chloroform	1 fluid dr.
	Saccharin	3 grains.
	Oil of cassia	9 minims.

M. Sig.—Put the powder in a dry mortar, add a little of the oil, rub well together, and then the balance of the oil. Then add all the water at once, and rub diligently until the emulsion is formed. Dissolve the saccharine in the spirit of chloroform, add the oil of cassia, and add to the emulsion. The emulsion is said to be white, of fine consistency and pleasant taste.—*Pharmaceutical Record*, December 15, 1887.

MALARIA MIXTURE.

Malaria mixture has the following composition:—

℞.	Chinoidine, ʒiv., dissolved in alcohol	Oij.
	Cinchonidine sulph.	ʒj.
	Acid sulph. arom.	ʒij.
	Ext. fluid cimicifuga.	
	Ext. fluid xanthoxylum.	
	Ext. fluid leptandra.	
	Tr. gaultheria, of each	ʒi.
	Syrup simp.	Oij.

M. Sig.—Half ounce every two or three hours during absence of fever.—*Medical Standard.*

CHOLERA MORBUS OF MALARIAL FEVER.

Prof. A. B. Palmer, Ann Arbor, recommends:—

℞.	Camphor gum,	
	Opium	āā gr. j.
	Calomel	gr. iij.
	Sugar of milk	gr. xv.

M. Sig.—Rub up into a very fine, impalpable powder. This should be dropped into a teaspoonful of water, and taken far back into the mouth, followed by a single, small swallow of water. Repeat in an hour if relief does not follow.—*Pacific Record of Medicine and Surgery*, February, 1888.

WHOOPING-COUGH.

Dr. P. Fedoroff recommends:—

℞.	Morphine, muriatic	gr. ij.
	Apomorphin, muriatic	gr. j.
	Acid, muriatic	ʒss.
	Aq. distill.	ʒviij.

Sig.—A tablespoonful four times a day.

THE
Medical Bulletin.

JOHN V. SHOEMAKER, A.M., M.D., Editor.
F. A. DAVIS, Att'y, Publisher.
A. L. HUMMEL, M.D., Business Manager.

Philadelphia, March, 1888.

PENNSYLVANIA STATE MEDICAL SOCIETY.

THE efficient chairman of the Committee of Arrangements, Dr. John H. Packard, of Philadelphia, announces that the annual meeting of the Society will take place in this city Tuesday, June 5, 1888. All titles of papers, he further adds, should be sent in not later than April 15. This early appeal by an energetic member of the profession to serve and thoroughly organize the important annual gathering of the State Society should meet with the hearty coöperation of many members from all parts of the State. The practitioners who have enjoyed a large clientage and who have observed very many interesting and instructive results should take occasion to be present at this meeting and give the profession some of their experience. Beyond all doubt the most efficient and practical work could come from our practitioners from the country, many of whom can visit Philadelphia upon this occasion and teach many of the clinicians and learned professors more practical results than the numerous scientific theories now going the rounds in the medical journals. The rank and file of the profession in Philadelphia will therefore, it is to be hoped, step aside and do all they can to honor and be taught by their confreres from the country.

It is hoped further that the annual meeting this year may be exempt from the machinations of the clique who endeavored to run the association last year at Bedford. The early whispers and slight rumblings already heard are beyond all question a foreboding of a bitter disappointment, even to our best hopes. Unless the zealous members from other parts of the State are on hand early and are ready to stamp out all conniving, a few will be, or at least are already, on the alert to run the meeting to suit themselves.

SPERMATORRHŒA.

DR. JOHN F. WALSH, at the February meeting of the Camden County Medical Society, read an interesting and instructive paper upon Spermatorrhœa, in which he dwelt at considerable length upon the treatment of this obstinate affection. The various methods of galvanism and medication, especially with hyoscyamine, were the essential plans of treatment alluded to by the speaker. A five per cent. solution of cocaine was also recommended,—a drop of the solution to be deposited occasionally in the membraneous portion of the urethra. The practical method thus alluded to by Dr. Walsh, in which he cited some forty successful results, should call for continued investigation upon this disease, which has only of recent years received the present efficient attention and treatment it so much requires. The late Dr. Beard and the lamented Gross in their writings and teachings did much to alleviate and cure the unfortunate class of patients suffering from spermatorrhœa. Milton, also, in his recent work has added to very many practical methods of managing this affection, which still needs continued investigation for more efficient remedial agents to relieve as well as to effect a cure.

THE ANTI-VIVISECTION MOVEMENT.

ALL reforms are opposed in their beginning. It is not singular that experimenters in medicine should object to interference with what they doubtless believe to be important practical work from their standpoint, but they should not forget that others equally or better qualified to teach may see fallacies in their proceedings and deductions because of unprejudiced observation. It is undeniable that an immense amount of atrocious cruelty has resulted through indiscriminate vivisections in the past, and it would have been wise in those interested in this matter to have made amicable adjustment with the society for the restriction within proper bounds of such experiments rather than invite, through opposition and personal abuse, a war toward total abolition. Elsewhere we give the address of the President of the American Anti-Vivisection

Society, and the gentleman making it we know has had full opportunities to see for himself just what is going on in this direction at home and abroad. It will not do to sneer at the people who are trying to remedy that which has become an abuse, because this body numbers in its members not only many prominent physicians, but with them are associated those who, from their standing throughout the land, are able to command respect, and the membership is steadily growing. Many intelligent medical gentlemen not actual members of the society are fully in accord with its aims, and they will when called on, throw their influence into the work.

Although prominent experimenters openly deride the movement as cranky and impossible of success, it is well to remember that within the recollection of many not yet old the question of the abolition of negro slavery was thought to be confined to a few old women of both sexes; yet a continent has been convulsed on its account, and a wealth of life and money has been expended purely in defence of what became a national issue, and to-day sixty millions of people are thankful to the "agitators" who through their life-work made freedom a reality from the Lakes to the Gulf, and from the Atlantic to the Pacific. Cruelty in any form to man or brute will become odious before long, and it would be better for the profession to throw aside all bitterness and look calmly into this subject than to support blindly a practice not confined to a few competent observers, but dabbled in by too many undergraduates and newly-fledged practitioners whose studies will never benefit any one.

ALUM IN BAKING-POWDER.

THE report of Professor Wiley, chief of the Department of Agriculture at Washington, D.C., concerning the presence of alum in baking-powder, states that it enters largely into the composition of forty-four prominent brands which are consumed in considerable quantities. It is a notable fact that most of the baking-powders sold in bulk, by weight, and all "premium" powders the proprietors of which offer gifts to the consumer, are largely composed of alum. This substance is used in place of other acid salts, and entering constantly into the baking of biscuit, rolls, cakes, etc., becomes quite a factor in general diet. On this account, in view of the injurious effect on the economy of a continued absorption of alum, its use in the manner just mentioned should be proscribed by law. The abuse certainly comes under the head of food adulteration, and there would be little difficulty in the way of interference. It is sheer neglect that allows this injurious practice to go on unmolested. Chemical analysis has given the names of forty-four brands of adulterated baking powders to the public. If the law fails to apprehend the manufacturers, it is an inconsistency for which no explanation is adequate.

MEDICAL NEWS AND MISCELLANY.

DR. GEO. ERETY SHOEMAKER has removed to 3727 Chestnut St., Phila.

HOSPITAL REPORT.—The German Hospital, of Philadelphia, treated last month 293 patients, of whom 137 were discharged cured and 17 died.

NEUROLOGIST TO PHILADELPHIA HOSPITAL.—Dr. James Hendrie Lloyd has been elected Neurologist to the Philadelphia Hospital in place of Dr. Roberts Bartholow, resigned.

As soon as the German Crown Prince was "given up" by the doctors he began to grow better. This shows that the doctors can cure a man if they only go about it in the right way.

A NEW CURE.—Dimethylphenyloxyphyragol is said by the Hospital Gazette to be good for rheumatism. No family should be without it. Ask for it (if you can) at the nearest druggist's.

PEOPLE should be taught that even little children have nerves. A Newburg man, one day recently, spoke so sharply to a three-year-old child at the dinner-table that the child was thrown into convulsions, from which it did not recover for several hours.

DIPHTHERIA IN A LEHIGH COUNTY VILLAGE.—Diphtheria is epidemic at Rittersville, a village of 200 families midway between here and Allentown. The disease has entered about forty homes. Thus far the physicians have been very successful in coping with the disease, but a number of deaths have occurred.

CHARITY BALLS.—The select charity ball, the first given of the season, only realized four hundred dollars to each of the four institutions receiving the highest votes. The German Charity

Ball is said to have yielded almost four times as much money.

After paying all expenses the Hebrew Charity Ball had a return of eighteen thousand dollars.

It never pays for charity to be select.

THE MEDICO-CHIRURGICAL MARCH. — Mr. Joseph Scarlata, of Turkey, a member of the class of 1888 of the Medico-Chirurgical College of Phila., Pa., has written a march for the piano, and dedicated it as follows: "To the Honorable Faculty of the Medico-Chirurgical College as a mark of gratitude, and to my dear companions as a sweet souvenir." The J. M. Armstrong Co., 710 Sansom St., Phila., Pa., are the publishers.

CROTON WATER.—The New York Health Board have been investigating a charge that druggists in that city had been selling filtered Croton water as distilled water. Of more than a hundred samples of "distilled water" purchased at as many drug stores, the chemist of the department found that two only were free from mineral or organic matter. The druggists at fault have been threatened with prosecution if the offence was repeated.

NORTHERN MEDICAL ASSOCIATION OF PHILADELPHIA.—At the last annual meeting of the Northern Medical Association of Philadelphia the following officers were elected for the year 1888: President, George W. Vogler, M.D.; Vice-President, Joseph S. Gibb, M.D.; Recording Secretary, Daniel Longaker, M.D.; Reporting Secretary, Louis J. Lautenbach; Treasurer, Charles P. Noble, M.D.; Censors, J. P. Stritmatter, M.D., to serve four years; L. Brener Hall, M.D., to serve five years.—*Medical and Surgical Reporter, Feb. 11, 1888.*

CARE OF THE EYES.—An oculist gives warning that it is injurious to rub the eyes while they are inflamed by the cutting winter winds and the dust raised thereby, and equally so to bathe them and go out immediately again in the air, as then there is danger of catching a cold. Most of the eye troubles at this season, he says, are caused by imprudence in rubbing or bathing. In rubbing the eyes the tear-line from the outside to the nose should be followed, though the majority pass the fingers from the inside out, which, he asserts, affects the sight and produces "crows' feet."

SMALL-POX.—Brooklyn people are reported becoming alarmed over the spread of small-pox in that city. The contagion does not appear to be confined to any particular locality, but is spread over a considerable area. Over forty cases were reported to the health department during a single day. According to the New York Tribune "the physicians all lay the spread of the disease to the cheap lodging-houses, which are now all being thoroughly fumigated. The frequenters of these lodging-houses have travelled about the city and have undoubtedly spread the contagion over a large area."

PHILADELPHIA CLINICAL SOCIETY.—The Philadelphia Clinical Society at its annual meeting, January 27, 1888, elected the following officers: President, Dr. Mary E. Allen; First Vice-President, Dr. Clara Marshall; Second Vice-President, Dr. Marie B. Werner; Treasurer, Dr. L. Brener Hall; Recording Secretary, Dr. Mary Willits; Reporting Secretary, Dr. Mary Willits; Corresponding Secretary, Dr. Emma E. Musson; Councillors, Dr. Amy S. Barton, Dr. I. G. Heilman, Dr. A. Victoria Scott, Dr. Edward E. Montgomery, Dr. James B. Walker.—*Medical and Surgical Reporter, Feb. 11, 1888.*

DEATH PENALTY BY ELECTRICITY.—Dr. Geo. F. Fell, says in the Buffalo Medical and Surgical Journal of February, 1888, from his observations the following deductions may be drawn:—

1st. That death produced by a sufficiently-powerful electric current is the most rapid and humane of that produced by any agent at our command.

2d. That resuscitation after the passage of such a current through the body and functional centres of the brain is impossible.

3d. That the apparatus to be used should be arranged to permit the current to pass through the centres of function and intelligence in the brain.

MALARIAL INSOMNIA.—Dr. F. Ecklund, of Stockholm, believes that there is a special form of insomnia due to malaria; in its severest form sleep by night is unattainable, but the sufferer is drowsy by day. In less severe cases a few hours' sleep are obtained on first going to bed, but the patient then awakes, in some instances always at the same hour, and cannot again sleep. He states (*Therapeutic Gazette*) that these patients can be relieved by quinine in small or moderate doses. The prescription he prefers is: ℞ Quin. sulph. gr. vi–xv, sodii bicarb. gr. xv–xxx. M. F. tal. dos. xii in caps. amyl. Sig.—Take one capsule every morning, and if the case require it one in the evening.—*British Medical Journal.*

INSANITY FROM LAUGHING GAS.—A correspondent, who signs himself "Observer," has sent the following to the New York Tribune: I read from your impression of this date a paragraph headed "Made Insane by Laughing Gas," and hasten to beg your valuable aid to influence thorough and patient attention to the case, prior to sending the unfortunate victim to an asylum for the insane, where there can be little chance of restoration to reason. I have been sadly interested in just such an occurrence, and after some years of care and watchfulness, attended by firmness in control, the result is gradual improvement, and will no doubt be entire recovery.

There are numerous sacrifices of the human mind through careless and uninterested hasty opinions, and no more valuable assistance can avert such misery than your stringent ventilation and daily record.

ANTISEPTICS IN THE MOUTH.—Fermentative, putrefactive, and septic conditions in the mouth and the subject of dental caries receive altogether too little attention from the majority of the members of the medical profession. They altogether too frequently leave the mouth and the teeth to the care of the individual and the dentist, and in many instances the latter is not consulted until many of the teeth are irreparably decayed. The teeth of children, and particularly those of the second dentition, as well as those of adults should be frequently looked into by the surgeon, who should see that the mouth is kept in a thoroughly antiseptic condition, and that the first evidence of decay receives the proper attention by a competent dentist. The importance of sound teeth cannot be overestimated when we consider the injurious effects of diseased teeth on surrounding organs, especially on the ears, eyes, throat, and nose. The patient should be made to understand that the object of thoroughly cleansing the teeth is not only for the purpose of making them white and to appear clean on the outer surface, but to remove from every portion of the mouth all substances that can ferment and decompose, and to render the teeth as thoroughly as possible aseptic. The use of the brush, quill tooth-pick, and floss-silk, as advised by dentists, for the removal of the debris of food lodged about the teeth, is important, as is also the frequent employment of antiseptic washes for the destruction of the germs harboring about them.—DR. JOHN O. ROE, in the *International Journal of Surgery and Antiseptics.*

A PLEA FOR PURE MILK.—*Mr. President:* The subject that I have selected for this evening's discussion is one that is of interest to every member of the community—to the young and to the old; to the sick and to the well; to the baby who is being "raised" upon the bottle as well as to the physician who is superintending that precarious process—for all use milk in some form, or in some preparations of food, every day. Therefore, we, as guardians of the public health and investigators of the causes of disease, can, perhaps, with profit spend a short time together in the consideration of this important subject.

In former times very little thought was given to the milk supply—it was enough to know that it was cow's milk—but whether the cows were healthy or diseased was of secondary importance. Now the sentiment upon this subject is rapidly undergoing a radical change, and physicians, scientists, and the press are laboring together to teach the people the importance of scrutinizing the milk and the source from whence it is obtained.

While every individual is concerned in the question of pure milk, although they may never have given any thought to the subject, it is to ourselves, as men having the issues of life or death in our hands, that the matter has particular interest. The healthy and robust person does sometimes partake of unwholesome or inferior milk with impunity; but to the typhoid fever patient or others suffering with low forms of disease, or to the infant deprived of its natural food, the quality of the milk will often decide the issue of the struggle for life. In giving milk to an invalid it is of paramount importance that it should be rich in solids, fresh and sweet; and an article that enters so largely into the diet of a fever patient should be selected with care, for upon its proper digestion and assimilation largely depends our efforts to sustain the patient's strength. To the typhoid fever patient it means a great deal whether the milk given is fresh or not, as firm coagulæ may form within the stomach, pass into the bowels and cause an exhausting diarrhœa or perforation.

Of late much has been said and written about a peculiar irritant poison termed tyrotoxicon, discovered by Prof. Victor C. Vaughn, which develops in milk under certain circumstances and has given rise in some instances to wholesale poisoning, and is no doubt frequently the cause of diarrhœa in children or that train of symptoms which we call cholera infantum. It is not a rare occurrence during the warm months to read of members of a picnic party being poisoned after partaking freely of ice-cream. While we are not warranted in assuming in every instance that these are cases of tyrotoxicon poisoning—as unwholesome eggs may produce similar effects—yet there can be no doubt that the element of danger is always present under circumstances such as frequently attend these social gatherings. That is, the mixing together, for ice-cream making, of milk of different degrees of temperature, and perhaps some of it already undergoing the acid fermentation. Particularly is this apt to be the case when the supply is obtained by voluntary contributions from those participating. That milk is the cause of some of these cases of poisoning *en masse* was clearly proven by Dr. Newton, State Milk Inspector, who investigated the circumstances and analyzed the milk supposed to be the cause of the poisoning of 73 persons—guests of three hotels in Long Branch in the summer of 1886. In these instances it was conclusively demonstrated that tyrotoxicon was the poison present, and that improper management of the milk was the cause of its formation.

At the present time investigations are being conducted in different parts of the world with

the view of obtaining a more intimate knowledge of the disease-conveying properties of milk, and observers have demonstrated the possibilty of the transmission of the germs of typhoid fever, phthisis, and other diseases by the milk from diseased animals, or those that drink impure water. The health authorities of Paris are in favor of expelling all dairy cows from the city limits, because their unhealthy surroundings and the quality of food they receive, renders them a menace to the public health, it having been proven that they are a prolific source of pulmonary consumption, through their milk, which in some cases is loaded with the bacillus of the disease, In the cases where scarlet fever and diphtheria have been conveyed by milk, the poisons have probably got into the fluid from the cuticle or throat discharges of persons ill or convalescing of those diseases while employed about the dairy. Mr. Ernest Hart, as reported in the transactions of the International Medical Congress of 1881, has collected and tabulated fifty epidemics of typhoid fever, fifteen of scarlet fever, and seven of diphtheria which have been traced to milk. Milk contaminated with pus from an inflamed udder, or an abscess on the udder, will give rise to stomatitis in children and to aphthæ on the mucous membrane of the lips and gums. There is some evidence to show that human beings may be affected with certain diseases of the mouth, such as general redness, aphthous ulceration, diphtheritic-like coating and swollen tongue, as a result of using milk from cows suffering with the foot-and-mouth disease. As instancing particular cases where disease has been traced to the milk, I may mention an epidemic of typhoid fever that occurred in Cologne, Germany, a few years ago, which was caused by milk from an infected dairy. A singular outbreak occurred in Aberdeen, Scotland, in April, 1881, and the cases were limited to the area of a particular milk-supply, 88 per cent. of the families using the milk being attacked. The symptoms were of an anomalous febrile character. In the Western States a peculiar disease has several times prevailed, which is caused by the milk of cows affected with the "trembles," which is supposed to be produced by the animals feeding on Rhus toxicodendron (poison-ivy). In children afflicted with this milk sickness there is extreme weakness, vomiting, fall in bodily temperature, dry, swollen tongue and constipation.

In view of these facts we must be impressed with the importance of obtaining a supply of milk from healthy, well-fed, and properly-cared-for animals.

All who are familiar with the prevailing method of caring for cattle during the winter season know that in a great many cases the water-supply is obtained from wells that are in close proximity to the barn, and receive a variable amount of the liquid manure, either directly, as after heavy rains, or by percolation through the soil.

It has been demonstrated that typhoid fever has been caused by milk containing the specific poison of the disease, and that consumption, and perhaps other affections, have been produced in the same manner; but how many cases of these diseases have developed from this source, and never traced to their proper origin, will always remain a mystery. Typhoid fever is a disease largely prevalent in the cities, and the rural districts are not strangers to its ravages. Is it not possible that the barnyard wells hold a causative relation to many of these cases through the medium of the milk? And may we not have here a partial explanation of the well-known tendency of this fever to prevail more extensively in the winter months? As during the warm season the cows are almost continually in the field, and obtain drinking water from running streams or springs. One of the most difficult things to do is to trace any suspected milk to its source, as the supply of a number of dairies are frequently thrown together by the large dealers, thus rendering it almost impossible to isolate the individual cow or herd contaminating the milk furnished in a given case.

Owners of cows kept for dairy purposes should be impressed with the danger incurred by allowing their stock to drink of impure water; and, aside from the possibility of contaminating the milk, is the risk of pecuniary loss by the cattle themselves becoming diseased. Physicians, and also the press, that powerful agency for the education of the people, should leave no opportunity unimproved whereby those who supply us with milk may be taught the necessity of careful supervision of the hygienic surroundings of their cows. Fresh air, sunlight, pure water, good food and exercise are just as essential to keep a cow in good health as they are for her owner.

We assume that the dairyman knows what kind of milk he sells, and, to a certain extent, is acquainted with the physical condition of his cows. In some cases business interests may cause a moral blindness to defects or diseases that renders a certain cow's milk unfit for food, and it is in these cases that State supervision would do so much good. It has been asserted that the retailer, also, should know the quality of the milk he sells. In a measure this is true, because every milkman can own a lactometer, and it would require but a moment for him to ascertain if the milk he is about to dispose to his customers is of the legal standard of richness. But it is plain that the consumer is but partly protected even if this should become the universal custom among milkmen. All that the lactometer can do is to give the specific gravity of milk and,

the State assumes that milk with a specific gravity of 1.029 or higher is pure.

The State's standard for pure milk is a specific gravity of 1.029 and 12 per cent. of solids. But this does not indicate what manner of cow it was that gave milk of this quality—whether diseased or healthy. And this is the important point to guard. Milk that just clears the State's standard of richness, if from a healthy cow, is far superior to that which is much above the legal requirements, but from a diseased animal.

We can never be sure of our milk supply until we have inspectors of dairy cattle, whose duty it shall be to examine all cows in the State at least once every three months, with authority and power to destroy or isolate any unhealthy animals, and prohibit their milk being used. Also, to examine their surroundings, food, source of water-supply, etc. This would involve increased expenditure upon the part of the State; but the health of the people is the health of the State. It should be as much the duty of the State to inspect the source of milk-supply as it is to inspect the milk after it reaches the distributing stations. The fact is the former course is the more important, as there are no known rapid means whereby the milk of a diseased cow can be distinguished from that of a healthy animal. Bacteriological investigation may determine whether the germs of tuberculosis or typhoid fever are present, and inspection and chemical analyses of milk may indicate the percentage of solid constituents; but only by inference does it reveal the fact whether the milk has been skimmed or watered, or whether the animals supplying that milk habitually give an inferior or unwholesome article. Watered or sweet skimmed milks are not unhealthy, *per se;* they are simply frauds upon the community if sold for pure milk; and hence it is plain that a method of surveillance that only takes cognizance of the adulterations of milk, without considering the possibility of its being a disease-conveying agent, falls short of its object as a conservator of the public health.

While much of the legislation bearing upon the milk question is directed against the original handlers of the article—the dairymen and wholesale dealers—it is plain that the supply cannot be guarded at all points until some attention is given to the retailers as well All over the city we see the signs indicating where pure milk is sold. But in a great many cases the surroundings are such as to preclude the possibility of the milk upon the premises being pure. We know that milk possesses the property of absorbing gases and disease germs; and it frequently happens that the cans containing the milk are kept in close proximity to the water-closet or the hydrant, the untrapped drain-pipes of which lead directly to a sewer. Milk kept with such surroundings cannot be wholesome. Then, too, the families of milk dealers are liable to the same diseases as are other men's families—typhoid fever, scarlet fever, diphtheria, etc. It may happen that the excreta from those patients must be thrown into the water-closet or privy that is in the vicinity of the milk-cans; or that members of the family may pass to and fro from the sick room to where the milk is kept. It is needless for me to enlarge upon the dangers incurred by the consumers of that milk.

That a certain percentage of milk supplied to this city, especially in the warm weather, is unfit for any other purpose than cheese-making, is a fact known to us all. And even during the cold months I have frequently inspected samples that were sour at the time of delivery, or became so in a few hours after, although placed in the ice-box as soon as received. This indicates a fault or error in the manner of caring for the milk, or that it had been kept too long before delivery.

That dangers do lurk in the milk-can is a fact known to every one of us, and until these dangers are minimized by proper supervision of the cattle supplying our milk, it behooves every physician to instruct his patients in the proper management of the fluid, so that it may fulfiil its functions as an article of food, instead of proving a poison. First in importance is boiling. Whatever disease germs may be present will certainly be destroyed if the milk is maintained at a boiling temperature for a few minutes. This may also be done as an economical measure, for milk will keep sweet and wholesome for a long time after boiling, if tightly bottled. Aside from the considerations mentioned above, milk should be boiled because it is thereby rendered more easily digested, it having been demonstrated that the coagulum of boiled milk is sooner acted upon by the gastric juice.

Nearly every one has a general idea of one o the principles involved in keeping milk sweet—that of keeping it cool—but a great many do not comprehend the importance of keeping it in suitable vessels, and covered, to exclude dust and prevent the absorption of foul odors. While the buyer is not able to prevent the contamination of the milk before he receives it, he should strive not to add to its impurities by carelessness in his own house.—Read before the Camden City Medical Society, February 9, 1888, by DANIEL STROCK, M.D.

EIGHT CASES OF DIPHTHERITIC STENOSIS OF THE LARYNX, IN SIX OF WHICH TRACHEOTOMY WAS DONE.*—CASE I.—M. W., female, æt. 11 years. On June 18, 1884, I received a telegram from Dr. J. H. Kennedy, of Aberdeen, Md., asking me to come to that place prepared to do trache-

*Reported by J. Edwin Michael, A.M., M.D., Prof. of Anatomy and Clinical Surgery in the University of Maryland.

otomy. The patient had been doing well under an attack of pharyngeal diphtheria for some days, though there yet remained grayish-white patches of exudation on the tonsils and pharyngeal walls. Forty-eight hours before I was called she began to have laryngeal cough and lose her voice. For the last twenty-four hours she had grown rapidly worse, notwithstanding steam inhalation, quinine and other remedies intelligently applied by Dr. Kennedy. When I saw her she was breathing with great difficulty, shown by marked epigastric, intercostal and supraclavicular depression. Cyanosis was slight, but had persisted for some hours. She was restless and threw herself about from side to side, and exhibited in a marked degree the usual jactitation seen under these circumstances. I thought she would die within twelve hours unless relieved by operation. The state of the case was fully explained to the parents, and at their request the operation was performed. Chloroform was administered by Dr. Kennedy; the trachea was opened with great ease, since the child's neck was spare and the tube of considerable size. After the discharge by coughing of a considerable mass of mucus, shreds of membrane and blood, a large double canula was inserted and secured by tapes in the usual way. The relief was absolute. By the time the patient had recovered from the effect of the chloroform all cyanosis had passed away and she expressed her gratitude for the relief afforded as best she could without the use of her vocal organs. Dr. Kennedy conducted the after-treatment of the case to a successful conclusion. Upon one occasion, I think four days after the operation, the tube was dislodged, but the patient's father who was a mechanic and a clear-headed man, readily replaced it. I saw her twice afterward, and my notes are as follows: June 22.—Has not had a bad symptom. Pharynx cleared up. Strength returning. June 29.—Tube out; wound nearly healed. Patient well. The recovery was complete.

CASE II.—M. S., æt. 6. Male. On Saturday, Dec. 20, 1884, I was called to see the patient in consultation with Dr. James Carey Thomas. There were two boys in the family, both of whom had been suffering for a day or so with pharyngeal diphtheria, and both of whom were suffering from stenosis. (The case of W. S., the younger child, will be considered later). M. S. had patches of membrane on tonsils and pharynx, a croupy cough, aphonia and some dyspnœa. We thought operation was not then indicated and ordered hydrarg. bichlor. gr. $\frac{1}{32}$ every three hours, the other measures, steam, sprays, stimulation, etc., which had been appropriately used by Dr. Thomas, to be continued. We arranged that I should spend the night at the house, and that Dr. Thomas, who was very much fatigued, should return home to be called in case of necessity. As the night wore on the child grew worse, until it began to be cyanosed and the cyanosis was persistent. Dr. Thomas was called, and agreed with me that the time for operation had come. Chloroform was the anæsthetic used, and the trachea was found and opened without difficulty. Masses of mucus and membrane were coughed out, after which the canula was inserted and fixed in the usual way. The immediate result of the operation was beautiful. Breathing became easy, cyanosis passed away, and the boy was comfortable. During Sunday this favorable state of things continued with the exception of some rise of temperature in the evening. In the meantime Dr. Thomas' medical treatment was continued as before. About 4 o'clock on Monday morning the respiration again became difficult. The membrane extended downward. The canula was removed about 10.30 on Monday morning, but despite all our efforts the dyspnœa increased and the patient died in the evening of that day.

CASE III.—B. G., æt. 2. Female. On January 10, 1886, I was called to see baby G., in consultation with Dr. James Bosley. The patient had been suffering for several days with croupy cough, with gradually increasing dyspnœa. When I saw her she had aphonia, marked retrocession of the epigastrium, intercostal and supraclavicular spaces on inspiration, and had been slightly cyanosed for some time. Dr. Bosley had used the ordinary means of controlling the disease, viz., quinine, steam from slacking lime, emetics, etc., but without effect. There was not a sign of membrane about the fauces. Clinically speaking, it was a case of membraneous croup. The case was explained to the parents and the operation done at their request, Dr. Bosley giving chloroform. The child's neck was fat and short and the trachea very small, so that the operation was not without difficulty. The tube was, however, found and opened, and after the expectoration of mucus, etc., the canula was adjusted as usual. The long time taken up and the hemorrhage, which was considerable, left the child in a condition nearly approaching collapse by the time it was finished, and we had to use stimulation and artificial respiration for some time before the child revived. After it began to breathe spontaneously it soon rallied and was soon comfortable and easy, all appearance of dyspnœa and cyanosis having disappeared. The immediate effect of the operation was brilliant, and for several days there was every promise of a permanently successful issue. On the 13th, however, three days after the operation, the wound in the neck became covered by a grayish-white exudation, and there was some evidence of returning dys-

pnœa. Notwithstanding all our efforts, extension downward of membrane continued, and the child died from that cause on January 15, five days after operation.

CASE IV.—Sybil P., æt. 3. Female. Was called on March 3, 1886, 8 P.M., to see S. P., in consultation with Dr. W. R. McKnew. She had been suffering from pharyngeal diphtheria, from which she had about recovered, as all diphtheritic exudation had disappeared under the use of trypsin, spray and mercury constitutionally. When I saw her there was considerable dyspnœa, aphonia and marked retrocession of the spaces on inspiration, but as there was no cyanosis I thought operation might be deferred and would possibly not be necessary. She grew worse, however, instead of better, and at 11.30, cyanosis being marked and the patient evidently failing, the operation was determined on. Dr. McKnew gave chloroform. The operation was difficult on account of hemorrhage and small trachea, but was finally accomplished. Much mucus and masses of exudation were discharged from the wound by coughing, after which the canula was inserted and secured in the usual way. Some hypodermic stimulation and artificial respiration were necessary, as in case III., as the pulse was very feeble and she would not breathe without assistance, but finally reaction came and all went well. All symptoms were favorable until the night of the 4th, when difficulty of respiration again appeared, and the patient died on the morning of the 5th, from extension of membrane.

CASE V.—Baby H., æt. 3½. Female. On the afternoon of Sunday, April 10th, 1887, I was called to see B. H., in consultation with Dr. J. G. Holliday. She had suffered from pharyngeal diphtheria, and then had the remains of a patch on one tonsil. Symptoms of stenosis had set in forty-eight hours before I saw her, and had been met by appropriate medical treatment. They had, however, become more aggravated, and Dr. Holliday was convinced that unless surgical aid were rendered the little girl would die. When I saw her she presented a typical picture of a child dying of croup. Dyspnœa, retrocession of spaces on inspiration, aphonia, cyanosis, jactitation were all present. I thought the child doomed, and gave the parents but little hope of a favorable result from operation, but expressed my willingness to perform it should they wish to avail themselves of the little chance it gave. They desired me to operate on the statement of facts I had given them, and I did so, Dr. Holliday giving chloroform. All went well until the moment of opening the trachea. As I slit open the tube there came a terrific gush of dark blood, from whence I do not know. We tried to sponge it away, but it came too fast. The child gasped and sputtered, and was rapidly drowning in her own blood. The mother, who had been quite courageous up to the time, cried out in agony that her child was dead. I shall never forget the dreadful conviction which came over me that the child would die in my hands. I continued my efforts, however, and finally plunging my finger in the wound, found the opening in the trachea, and catching one side of it with my nail, succeeded with the other hand in inserting the canula. As soon as the canula was in place the hemorrhage ceased as if by magic, and, although the child was in a state bordering on collapse, hypodermic stimulation and artificial respiration soon did their work, and she began to breathe spontaneously. I did not see her again for a week. Membraneous formation continued, and about four days after operation Dr. Holliday received an urgent request to hasten to see her, as she was choking to death. He found her suffering from dyspnœa, which he relieved by disengaging a membraneous cast of the trachea about an inch and a half long from the canula. From this time all went well. The canula was removed at the end of two weeks, and the child made a perfect recovery.

CASE VI.—Baby W., æt. 2. Female. I was called on October 10, 1887, to see the patient in consultation with Dr. J. G. Holliday. The case was one corresponding with the first related in all essential details, and had arrived at the condition of laryngeal stenosis which demands interference, in my humble opinion, when the doctor was good enough to request my attendance. Dyspnœa, with retrocession of spaces, aphonia, cyanosis and jactitation were all present. Upon a very unfavorable statement of the chances the parents requested that the operation be done. Dr. Holliday administered chloroform. I expected from the age of the child, fatness and stoutness of neck and small size of the trachea, much difficulty in doing the operation. I was, however, very agreeably disappointed in that, for the bleeding was so slight that I scarcely soiled my fingers, and although the tube was so small as to admit none but the smallest canula made it was easily found and opened. After the usual mucus and membranes had been coughed out the canula was inserted and secured, and all went well. The child soon became rosy and breathed easily. Dyspnœa, however, came on again in about thirty-six hours, and the child died from extension of membrane in forty-eight hours.

CASE VII.—W. S., æt. 4. Male. This patient was a brother to case II., previously related, and was seen in consultation with Dr. James Carey Thomas, Dec. 20, 1884. The difference between the two cases was one of degree only. This child had pharyngeal diphtheria and laryngeal

stenosis. His symptoms relating to the latter condition were urgent, but not so grave in my opinion, nor in that of Dr. Thomas, as to require tracheotomy. The treatment under which Dr. T. had placed him, viz., hydrarg. bichlor. $\frac{1}{32}$ gr., atmosphere of steam, carbolized sprays, and quinine with iron, was continued. His condition remained serious for several days, when his breathing became easier, cough looser, membranes disappeared, and he made a good recovery.

CASE VIII.—Mary P., æt. 3. Female. On March 16, 1886, by the courtesy of Professor Christopher Johnston, I was called to see this patient. I found her in a garret surrounded by a large family of Russian Jews, all in a state of great excitement. The child had been sick for several days, and a number of physicians had been called in and discharged. She had a croupy cough, marked dyspnœa with retrocession of spaces, aphonia and jactitation. Her lips were, however, rosy and her pulse of good quality. I ordered plenty of steam in the room, syr. ipecac to be given in teaspoonful doses, when dyspnœa became worse, and hydrarg bichlor. $\frac{1}{48}$ gr. to be given with tr. ferri every three hours. The people were devoted to the child and carried out my treatment religiously. I saw her three times a day for several days, expecting every visit to be called on to do tracheotomy. When dyspnœa became worse the emetic gave some relief, the child ejecting a considerable quantity of tough membrane. On the fourth day after I began to treat her, the patient began to improve distinctly. The cough became looser, the breathing easier, and there was some little return of voice. I continued the mercurial treatment for a week, when, as the graver symptoms had subsided, I substituted tonic measures, and the child finally made a perfect recovery.

Remarks.—Indications for tracheotomy. In order to appreciate the true position of tracheotomy, it is necessary to understand that it is a mere mechanical device, intended to relieve a mechanical difficulty, and that it is indicated only when the difficulty of breathing is so great as to endanger the life of the patient, and so situated as to be within reach of the operation. Hence I am in the habit of waiting for cyanosis of a more or less permanent character, as the final indication, and assuring myself by auscultation that the air-passages below are in a condition to profit by the operation. The operation is to be regarded in no sense as a cure for croup, and I always try to be explicit on this point with patients, making it a rule to mention the usual ways in which a case may terminate fatally, after the operation has been successfully done. I don't think there is any positive contra-indication providing the child is in my opinion dying of laryngeal obstruction, and that the air-passages below are comparatively free. The mere existence of croup even with considerable difficulty of respiration does not indicate tracheotomy, as the two cases VII. and VIII. just related prove to my satisfaction, even where the retrocession of the spaces on inspiration is very considerable, and the loss of voice is complete.

Technique.—My method of doing the operation presents nothing unusual. After the first incision the tube is reached by tearing with forceps and director. All hemorrhage is controlled before the tube is opened, if there is time. I open the tube, having it fixed by a tenaculum in the hands of an assistant, by a sharp-pointed curved bistoury, cutting upward to avoid possible abnormal position of the innominate artery, and subsequently enlarging the slit so made if necessary with probe-pointed bistoury. There is no hurry about putting in the canula except in unusual cases, as in case V. The patient should have time to cough out all loose matters in the trachea. I use the ordinary double canula, secured with tapes, and dress the wound by laying a large pad of iodoform gauze over all. It serves as a sieve for the air going into the lungs, as well as a dressing for the wound, can be removed and changed readily, and I have an idea that the amount of iodoform drawn into the trachea by respiration does good rather than harm. The time for removing the tube must be a matter of judgment and experiment. By removing the inner tube and closing the aperture the fenestrum in the outer tube will permit breathing through the larynx, and in this way we must judge when the canula may be dispensed with.

CREMATION IN NEW ENGLAND.—It is now thought probable that Worcester, Mass., will have the first crematory in New England. Since the Boston people gave up their attempts to form a stock cremation company some of their leaders have united with the Worcester Association, which is incorporated as the Massachusetts Cremation Society, and a new effort has been made to get stock subscriptions. It is desired to raise $10,000 before beginning the work of erecting a crematory. Of this amount between $3000 and $4000 has been subscribed in Worcester, over $2000 in Boston, and about $1000 in Springfield. Additional subscriptions are expected from Providence and other New England cities, and there is little doubt expressed but that the canvass in progress will result in raising the desired amount.

A crematory is being built at Zurich, Switzerland, and others are soon to be erected at Basel and Homberg. Between the date of completion of the new crematory at Stockholm, about the middle of October and the 6th ult., nineteen bodies were incinerated within its walls.

COMMERCIAL NEWS.

An Interesting Monograph.

Grimault & Co., of 8 Rue Vivienne, Paris, have published an unusually interesting monograph on the Essential Oil of Sandal (Ol. Santal. Flav. Pur.), giving a concise history of the tree, the remotest information as to its uses in the arts as well as in medicine, and also as to its cultivation and the methods of procuring and preserving its essential oil, together with an exhaustive treatise on its therapeutic properties and clinical results obtained from its use. This pamphlet is from the pen of L. Midy, a Parisian pharmacist of the first class.

It is one of the most satisfactory monographs that has ever come to our notice. A few excerpts from its pages will show its scope and value: "It (the tree) is mentioned in the 'Nirukta,' or the writings of Yaska, the oldest Vedic commentary, written not later than the fifth century B.C., and is frequently referred to in the ancient epic poems of the Hindoos (the Ramayana and Mahabharata). The wood and the essential oil are held in great esteem by the Brahmins and other high caste Hindoos; the oil partly on account of its medicinal qualities and partly from its everyday use in religious ceremonies, and as a perfume at marriage feasts, and the wood is used to burn the dead.

"The gates of the renowned sanctuary of Somnath, the most sacred temple of the Hindoos, were constructed with this wood. These gates, supposed to have been in existence about a thousand years, are at present jealously preserved in the citadel of Agra.

"From remote times the Chinese regarded the Essence of Yellow Santal as a panacea in gonorrhœa, and was introduced by them to Java, the Phillippine Islands, Cuba, Peru, and San Francisco,—in short, to all countries where they have emigrated as laborers."

Copies of this monograph, as well as samples of the drug, may be obtained by physicians mentioning this journal, and applying to Fougera & Co., 30 North William Street, New York City.

Antiseptic Vaginal Tampons.

Dr. J. Marion Sims and other eminent gynæcologists have long since recommended for local applications to the vaginal walls, the os and cervix-uteri, the use of some absorbent substance that would convey the medicament, absorb the fetid secretions, and at the same time render them aseptic.

It is claimed that one of the most efficient means of accomplishing these several objects is to pack antiseptic wool, medicated as desired, into a gelatine capsule of proper size, inserting it as a tampon. These tampons possess many advantages over the absorbent cotton plug both as to cleanliness and efficacy.

A complete line of them, medicated in every desirable way, is made by H. K. Mulford & Co., of Eighteenth and Market Streets, Philadelphia, who will send samples of them, post-paid, to any physicians who mention this journal.

The Best Natural Purgative Water.

Sir Morell Mackenzie, M.D., in speaking of natural mineral waters, gives as his opinion that "the best which exists" is the Rubinat-Condal Water, which issues from a spring at a high altitude in the Pyrenees, in Spain.

The attention of the Spanish Government being drawn to the spring through the remarkable cures effected by its water, a careful official investigation was made, and, as the result, a Royal Decree was published on the 13th of June, 1885, declaring the Rubinat-Condal Water to be "of Public Utility,"—*an almost unprecedented recognition.* This we believe is the *only* mineral water that has ever been indorsed by the Spanish Government.

The following analysis by Dr. Don José Canudas y Salada (official chemist of the City of Barcelona and Professor of Chemistry in the Barcelona University) shows this superior feature of the water.

In a litre (2.113 pints) of Rubinat-Condal Water:—

	Grammes.
Sulphate of soda	93.230
Sulphate of magnesia	3.172
Sulphate of potash	0.228
Sulphate of lime	1.887
Chloride of sodium	1.990
Silica, alumina, ferric oxide	0.036
Loss	0.017
Total saline matter	100.560

The remarkable proportions of the sulphates here shown would seem to render this water superior to any other aperient water known.

On examination of the following comparative table it will be seen that the "Rubinat-Condal" possesses over four times the strength in the sulphate of soda, the action of which is mild, of any other purgative water in the world, and contains less than one-half of the quantity of sulphate of magnesia, the action of which is violent and painful, found in that water heretofore regarded as possessing the least.

One Litre of Water.

	Sulph. Soda. (Grammes.)	Sulph. Magnesia. (Grammes.)
Seidlitz	5.10	20.80
Friedrichshall	7.33	6.70
Pullna	10.76	12.61
Æsculap	20.31	29.80
Rokoczy	20.52	25.03
Hunyadi-Janos	22.85	22.35
RUBINAT-CONDAL	93.23	3.17

No change of diet or habits is necessary while using it. As a purgative its effect may be made mild or energetic at pleasure. It has also proven itself a powerful solvent and of very great utility in the treatment of diseases of the kidneys and bladder. It exerts also a very beneficial effect on the mucous membranes generally, and comes highly recommended for the treatment of catarrh of the air-passages, stomach, or biliary tract. In all forms of skin-disease it is a valuable adjunct, and is especially useful in the treatment of all gouty disorders and rheumatism. Those of our readers who have felt the need of a palatable and efficient laxative or cathartic for routine use in their practice would do well to write to the Rubinat Co., 80 Beaver Street, New York City, for a bottle of this water, saying they act on the advice of this journal. A full-sized bottle will be sent to any physician free.